ELECTRICAL SOUTH

MAY, 1950

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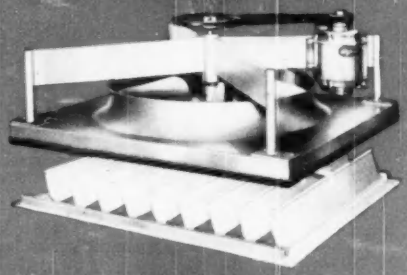
LOW-COST HOME COOLING IS HERE!

IT'S THE NEW

1950 HUNTER Package Attic Fan



PRICED TO RETAIL AS LOW AS $139.50

LOOK AT THESE FEATURES:

Easily installed • Quiet and powerful • Automatic ceiling shutter

Certified PFMA air ratings • 2 Sizes, 4750 and 6800 CFM

Fits low-clearance attics • Hunter quality construction

HUNTER FAN and VENTILATING COMPANY

392 S. Front St., Memphis, Tenn.

EXCLUSIVE FAN MAKERS SINCE 1886

Write, wire or phone for catalog, prices and names of nearest Hunter distributors

LOOK FOR THE REDEGE

IT'S YOUR GUARANTEE OF

FINEST QUALITY

OUTLET and DEVICE BOXES

Experience—over 40 years of it—lies behind National Electric's REDEGE Boxes. Every detail has been carefully designed to assure an efficient, *quality* product.

REDEGE Boxes are made from the finest mild steel, full 14 gauge, assuring uniformity of quality. The flush knockouts are cleanly cut with retainers that break at the knockout edge and leave no burrs. Nail and mounting holes are conveniently located for ease of mounting. REDEGE Boxes are *electro*-galvanized for *permanent* resistance to rust and corrosion.

Cable, conduit, concrete, device or gang boxes—whatever you need—the "REDEGE" signifies full compliance with Underwriters' Laboratories, Inc.

The "REDEGE" is the mark of quality.

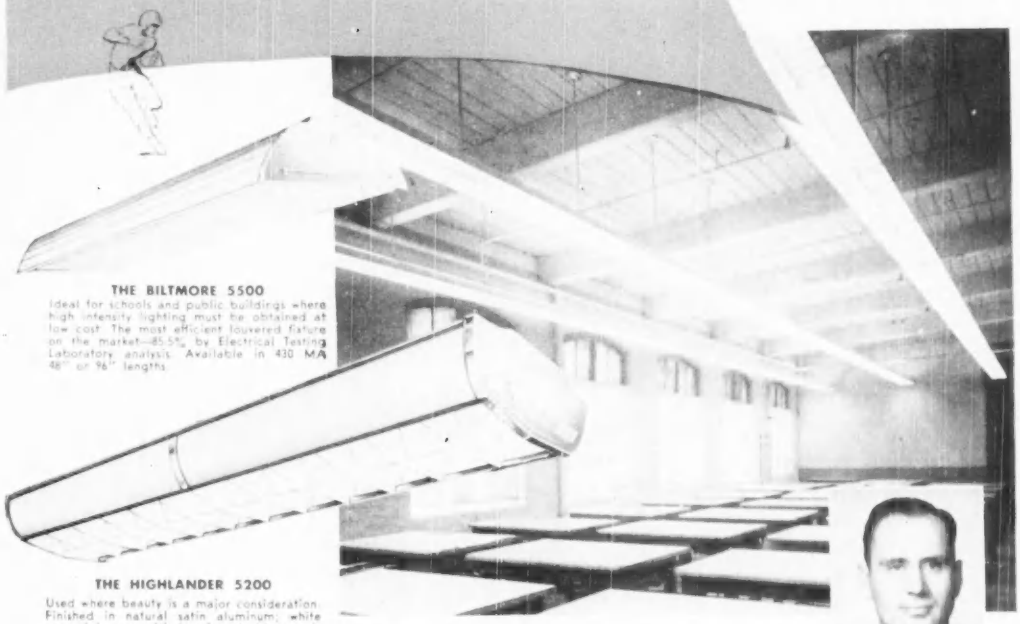
EVERYTHING IN WIRING POINTS TO

National Electric
PRODUCTS CORPORATION
1307 CHAMBER OF COMMERCE BUILDING, PITTSBURGH 19, PA.

ELECTRICAL SOUTH is published monthly by W. R. C. Smith Publishing Co., Marietta, Ga., and Atlanta, Ga., U. S. A. Subscription rates: United States and Possessions, $3.00 for one year. Canada and Foreign Countries, $10.00 per year. Entered as second class matter at the Post Office, Marietta, Ga., under Act of March 3, 1879.

Volume 30 Number 5

GEORGIA TECH *Chooses* GIBSON



THE BILTMORE 5500

Ideal for schools and public buildings where high intensity lighting must be obtained at low cost. The most efficient louvered fixture on the market—85.5% by Electrical Testing Laboratory analysis. Available in 430 MA 48" or 96" lengths.

THE HIGHLANDER 5200

Used where beauty is a major consideration. Finished in natural satin aluminum; white enamel louvers with translucent side panels of Polystyrene. Low unit cost. Nearly 80% efficient. Available in 430 MA 48" and 96" lengths.

Recent installation of Gibson 5000 fixtures in the A. French building of the Georgia Institute of Technology

MR. J. R. JENKINS
Supt. of Bldgs. and Grounds, Ga. Tech

More and more modern schools are being built, and old buildings renovated. One basic factor receiving major attention is planned lighting with quality fluorescent fixtures. That is why many schools and colleges—and technical institutes such as Georgia Tech—are installing Gibson fixtures. All components of Gibson fixtures are E. T. L. approved, and individually lamp tested before shipment. The two fixtures recommended for school installations are sturdily constructed from 20 gauge cold rolled steel or heavier, finished in the finest hot-bonded synthetic enamels, and attractively louvered.

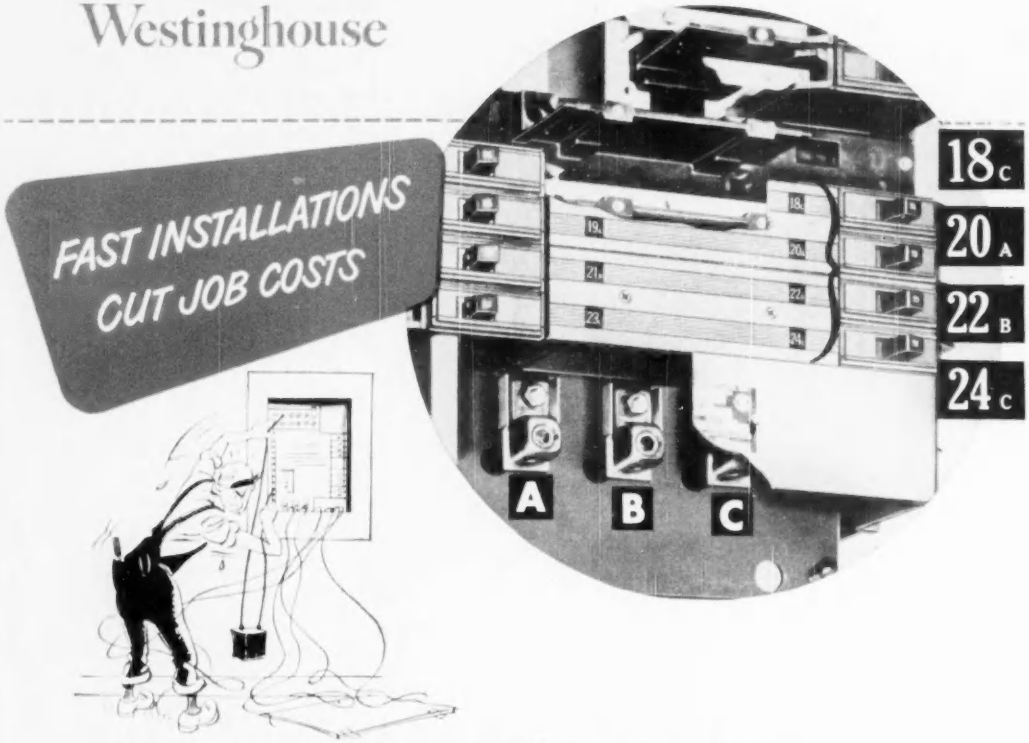
As a free service, Gibson representatives will study school buildings, and map out a plan for lighting for maximum visual health and comfort, without cost or obligation to you of any kind. For more information on Gibson Planned Lighting, write us today.

Newsweek
ADVERTISED IN
TIME

GIBSON *Manufacturing Co.*
1919 PIEDMONT CIRCLE, N. E. ATLANTA, GEORGIA

YOU CAN BE **SURE**.. IF IT'S

Westinghouse



eliminate panelboard "ring-out" time

. . . with PHASE IDENTIFICATION

"Ringing out" a panelboard can consume a lot of time . . . can cost you a lot of money. That's why Westinghouse 3-phase, 4-wire lighting panelboard design includes permanent pre-phased identification . . . a means of identifying —by letters at each breaker—the sequence of breaker and bus connections. The installer knows at a glance where each breaker is connected.

This feature alone promises a substantial cut in panelboard installation time. But with the Westinghouse lighting panelboard installed costs are reduced even further by . . .

Indicating trim clamps which speed the trim installation.

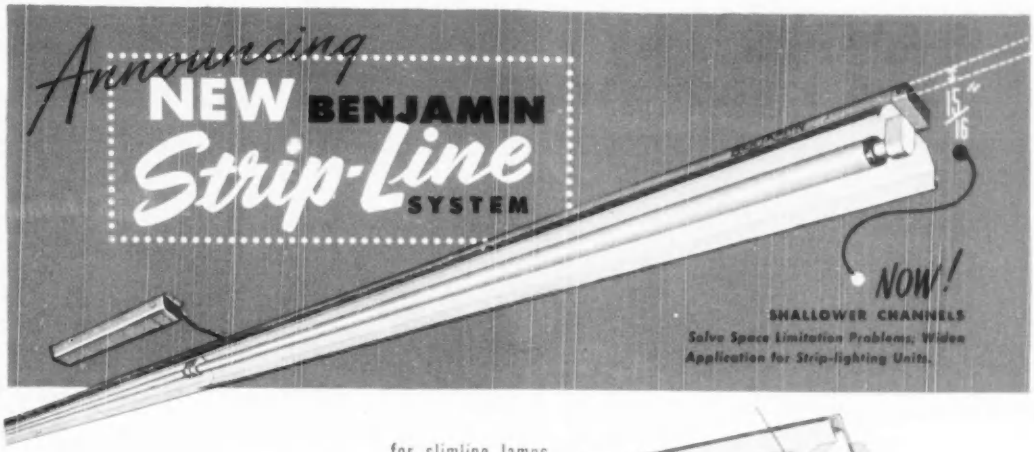
Quick-fasten access plates which are easily secured or removed by twisting just two wing nuts.

By combining these timesaving features with top-quality construction, Westinghouse gives you a superior panelboard that costs less . . . when *all* the bills are in. So next time be *sure* about savings. Specify Westinghouse!

Descriptive Bulletin 30-930 contains complete information. For your copy, write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. 3-40388

Westinghouse

PANELBOARDS



Here are the
ADVANCED FEATURES
you've been looking for
to increase efficiency and
simplify installation!

1. Extremely Shallow
   Channel is only 15/16" deep.
2. Special Terminal Block
   Eliminates soldering, taping and the use of wire nuts.
3. Channel Couplings Eliminated
   Built-in "Intra-Lock" construction of channels eliminates need for separate couplings.
4. Choice of Ballast Mounting
   Ballasts can be mounted on top of channel or remote from unit.
5. Channels Approved as Raceways
   Use of channels as surface metal raceways is approved by Underwriters' Laboratories.
6. Cross Section
   The same for all channels and reflectors.
7. Finish
   Special reflecting white finish on reflectors and channel covers.
8. Reflectors
   Choice of symmetrical or asymmetrical reflectors.

BENJAMIN
Strip-Line
FLUORESCENT LIGHTING SYSTEMS
Sold Exclusively through Electrical Distributors

BENJAMIN "STRIP-LINE" BULLETIN IS NOW AVAILABLE
Write for copy from your nearby Benjamin Electric Mfg. Co. Dealer, Ask Your Electrical Distributor

E-5118

A SAFE AND STEADY SELLER

"SECURITY"—THE FRICTION TAPE MADE BY

Instinctively—electrical contractors reach out for things they know and trust.

They trust "Security" because they *know* it stands up in service. It has high tensile strength. It is free of pin holes. It does not unravel when unwound from the roll. It tears straight. And it has a strong, rubbery adhesive that sticks and *holds*.

Is your stock of Security adequate?

U.S. RUBBER
SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

MECHANICAL GOODS DIVISION • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

FOR SAFETY'S SAKE . . . USE CONDUIT *(Full Weight Rigid Steel)*

THE YOUNGSTOWN SHEET AND TUBE COMPANY

Manufacturers of Carbon, Alloy and Yoloy Steel

General Offices — Youngstown 1, Ohio

Export Office - 500 Fifth Avenue, New York

CONDUIT - HOT AND COLD FINISHED CARBON AND ALLOY BARS - PIPE AND TUBULAR PRODUCTS - WIRE - ELECTROLYTIC TIN PLATE - COKE TIN PLATE - RODS - SHEETS - PLATES - RAILROAD TRACK SPIKES.

FOR EXPANDING CONTROL SYSTEMS...

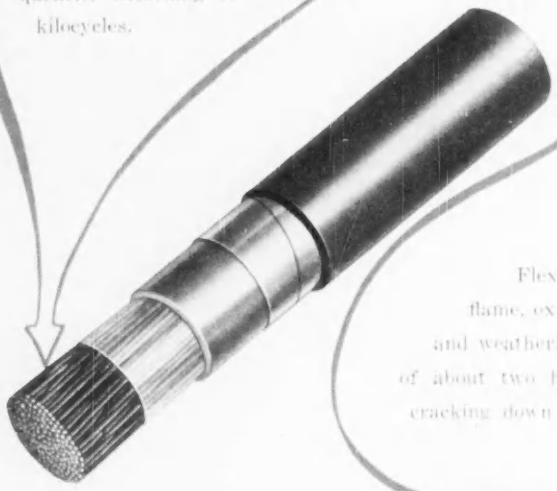
A 1-2 PUNCH THAT K.O.'s HIGH COST

Polyethylene insulation! PLASTEX jacket! In Simplex Polyethylene Control Cables this hard-hitting combination provides utilities with a sure-fire means of keeping down the cost while boosting the performance of those steadily-expanding control systems. . . . It results in a cable of unusually small diameter and light weight, allowing more conductors per cable for a given diameter and more circuits per conduit, keeping purchase cost low, and eliminating much of the time and labor needed for installation. . . . It assures low maintenance costs for it provides the electrical and mechanical stability that means long, trouble-free service under all operating conditions. Yes, when you're drawing up plans for new control circuits you can look to this team as a sure bet to knock down costs and keep them down. Why not get complete information now? Simply fill in and mail the coupon below.

1

POLYETHYLENE INSULATION

Thin-wall; small in diameter. Features high dielectric strength, high insulation resistance, low water absorption and good electrical stability. Its low power factor and dielectric constant assure low attenuation, low capacitance, and maximum transmission distance. Especially suitable for circuits operating at carrier frequencies exceeding 50 kilocycles.



2

PLASTEX JACKET

Flexible. Tough. Protects cable against flame, oxidation, water, oil, chemicals, sunlight and weathering. Stable over a temperature range of about two hundred degrees Fahrenheit. Resists cracking down to —58 F.

SIMPLEX WIRE & CABLE CO.
79 SIDNEY ST., CAMBRIDGE 39, MASS.
GENTLEMEN: PLEASE SEND A COPY OF CATALOG 5010 TO:

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

SIMPLEX WIRES & CABLES

SIMPLEX WIRE & CABLE CO.
79 Sidney Street
CAMBRIDGE 39, MASS.

There is NO SUCH THING as an "RLM TYPE" Lighting Unit!

Either it is RLM CERTIFIED or it is NOT.
The Only Way To Be Sure Is To

SEE the RLM LABEL!

NAME OF MANUFACTURER
RLM

Looks can be deceiving in lighting units, too! A lighting unit may LOOK like an RLM Unit, it may have a similar outward appearance, contour, shielding angle, etc.—but unless it is made in accordance with RLM Standard Specifications and carries the RLM Label, it is not an RLM Lighting Unit. There is no such thing as an "RLM Type" that does not have the label.

Why No "RLM TYPE"? The RLM Label on fluorescent and incandescent lighting units, not only assures the buyer of design and construction that meets certain minimum standards*, but also provides him with a WARRANTY of UNIFORM QUALITY.

Only those products of lighting manufacturers which are *consistently found* to be of *uniform quality* and meet the published specifications of the Institute are permitted to bear the RLM Label. This uniformity of quality is of exceptional importance to all those who buy, use, specify, recommend or sell lighting equipment. It is essential to uniformly satisfactory lighting equipment performance, that each unit in the system perform with equal efficiency to the other — that ballasts function with uniform efficiency — that the reflection factor be uniform from unit to unit — that the units be of uniformly durable construction with the identical gauge steel and the same thickness Porcelain Enamel. Such uniformity reduces to a minimum the plague of spotty performance by individual units in a lighting system.

How RLM Checks Uniformity of Quality
According to the RLM testing and inspection procedures, representatives of the Electrical Testing Laboratories periodically visit plants of all RLM member-manufacturers. They take lighting units right off the assembly lines and out of stock for testing and inspection at their laboratories. They may also obtain test samples directly from the distributors' shelves or use of contractors' stocks in order to check Uniform Quality at every level of distribution.

This activity of the RLM Standards Institute, which makes possible the Warranty of Uniform Quality, is not duplicated by any other agency in the lighting industry. That is why there is no such thing as an "RLM Type" Lighting Unit.

FREE SPECIFICATIONS BOOKLET! This up-to-date 16-page booklet tells why it is important to SEE the RLM LABEL before buying or specifying lighting units. It contains all RLM Specifications, covering vital construction and performance factors that should have major consideration by the buyers and specifiers. It is an indispensable help in the sale of industrial lighting units. Fill out coupon (complimentary copy for copies), send without obligation, with:

RLM Standards Institute,
Suite 825, 520 West Madison St.,
Chicago 6, Illinois.

This Advertisement is published in the interest of the Entire Lighting Industry by

RLM STANDARDS INSTITUTE

The letters RLM stand for Reflector and Lighting Equipment Manufacturers

*Every RLM Unit Must Conform with Certain Minimum Standards such as these:

Porcelain Enamel Reflectors — all RLM Units must have a specified thickness of Genuine Porcelain Enamel bonded to steel. This unsurpassed high reflection, scratch-resistant surface is the only comparable with the common denominator of enamels. Supports long and [illegible]

High Quality Ballasts — RLM [illegible] Units must be equipped with Certified Ballasts which provide high temperature [illegible] supply power [illegible] and [illegible] proper operating [illegible]

Reflector Design — [illegible] RLM Units must comply with the most advanced principles of Illumination Engineering. Such design provides the maximum [illegible] [illegible]

Sound Construction — RLM Units must comply with high fabrication and [illegible] [illegible] of [illegible] [illegible]

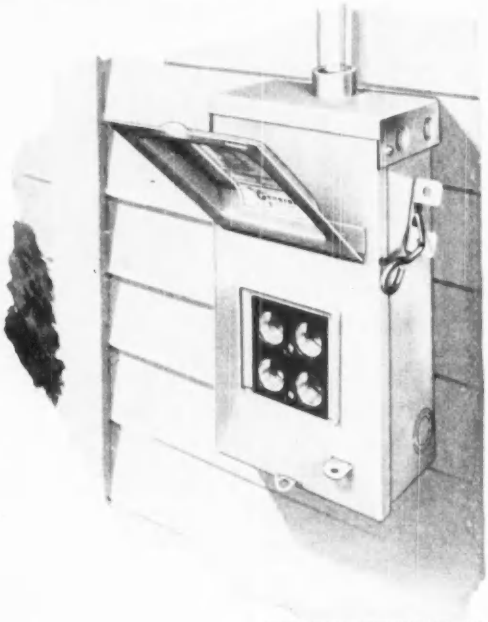
The Switch is to General
for Outdoor Service

Single and Double
Pullout
Combinations

Front Operated
Toggle
Combinations

100 Amp
Fusible Main
Service Equipment

30 to 1200 Amp,
HP rated
Safety Switches



R33NP4
Side Operated
Plug Fused
Service Equipment

General makes a complete line of Weatherproof and Raintight Service Equipment and Safety Switches

The next time take a good look at Generals outdoor equipment—recognized as one of the most complete lines of service entrance equipment and safety switches.

Enclosures made of *Zincgrip* steel are finished with a machine gray baked enamel for thorough protection against weathering—Dependable hinge design safeguards interiors from rain, sleet or snow—Ample knuckle room and abundant knockouts are provided for convenient wiring.

These and many more distinctive features will be apparent to you immediately upon examination—sold everywhere exclusively through wholesalers.

Write for our latest catalog 1909—and supplement 1911

General Switch Corp.

49 Roebling Street Brooklyn 11, N. Y.

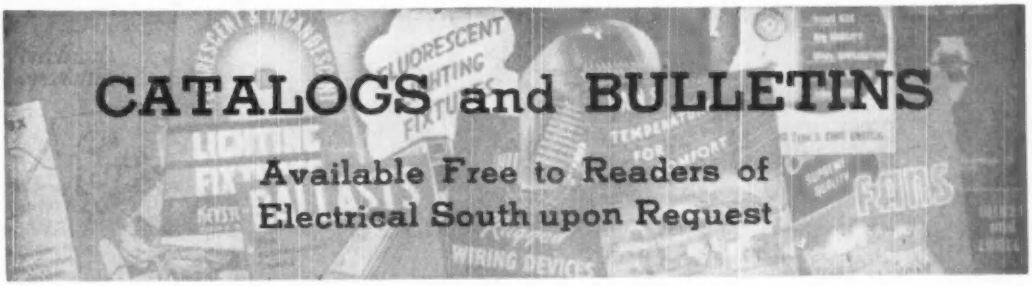
One of the largest Manufacturers of:

SERVICE ENTRANCE EQUIPMENT . . .
Pullout, Front Operated Toggle and Side Operated types.
Indoor—surface or flush, and Outdoor.

ENCLOSED SAFETY SWITCHES . . .
30 through 1200 Amps., 250V and 600V Type A, C and D.
Indoor and outdoor. HP rated.

BRANCH—CIRCUIT PANELS

SALES OFFICES IN EVERY MAJOR CITY



CATALOGS and BULLETINS

Available Free to Readers of Electrical South upon Request

(Additional items will be found on pages 11, 68, and 70)

1001—Reactors. Selection of proper reactors to match for specific current limiting requirements is simplified by a four-page bulletin, No. 1001, issued by Minter Mfg. Corp., 1226 Atlantic Ave., Brooklyn 16, N. Y. This illustrated 8½ x 14 inch folder provides a convenient check list to help electrical engineers specify standard reactors in inquiries about special models or sizes.

1003—Circuit Breakers. Operating characteristics, schematic diagrams and detailed performance data on bolt magnetic breakers for branch circuit protection are provided in a four-page 8½ x 14 inch folder. Cutaway views showing construction details are included. Bulletin No. 525 is issued by Minter Mfg. Corp., 1226 Atlantic Ave., Brooklyn 16, N. Y.

1005—Building Wire, Cable, Conduit. Extensive listings of data on a comprehensive line of electrical cable, building wire and conduit raceways are provided in a new 96-page publication, General Catalog No. 500, issued by Triangle Conduit & Cable Co., Inc., 1006 Jersey Ave., New Brunswick, N. J. Handsomely bound in stiff leatherette to take years of wear, this catalog also contains valuable information on electrical engineering and wiring standards for the aid of contractors, engineers, architects and industrial users.

1007—Panelettes. An illustrated 8-page folder describing Federal Nunn Q-I Panelettes is now available from Federal Electric Products Co., 30 Park St., Newark 5, N. J. Clearly explained are uses, adding of circuits, wiring, flexibility of the unit, protection afforded, and elements of the panelettes. Illustrated are typical wiring diagrams, along with various installations.

1009—Lighting Fixtures. Pertinent data on Swivelier "Mulled Line" are concisely summarized in Bulletin No. 1-7, available from Swivelier Co., Inc., 40 Irving Place, New York 3, N. Y. These fixtures, designed for use with the new 75-watt R30 lamps, can also be used with the 100-watt standard lamps. Available in available finishes, they are adaptable to many locations.

1011—Conduits. "National Electric Conduits" is the title of the new 36-page Catalog No. 605 which describes and illustrates the many types of electrical conduits that are manufactured by National Electric Products Corp., Chamber of Commerce Bldg., Pittsburgh 19, Pa.

1013—Proper Cable Sizes. A new booklet, "Selection of Proper Cable Sizes," has just been issued by General Electric's Construction Materials Advertising Department, Bridgeport, Conn. This publication deals with the method of determining cables and cable sizes and includes curves for multiple cables. Types AVA, AVB, and AVT.

1015—Shunt Capacitors. A new bulletin, No. 21, on the use of shunt capacitors for power factor correction has been prepared by the James R. Kearney Corp., 4250 Clayton Ave., St. Louis 10, Mo., and is now available for general distribution.

1017—Motor Starter. Features of the Allis-Chalmers Type RMC manually operated reduced voltage auto-transformer motor starter are described in a new bulletin, 14B7232, released by Allis-Chalmers Mfg. Co., No. 5-9th St., Milwaukee, Wis.

1019—Service Panels. Information and prices on protective control centers for homes, apartment buildings, service stations and industrial applications is contained in Bulletin #19, "New Push Button Service Panels," issued by Bullfog Electric Products Co., Detroit, Mich.

1021—Instrument Transformers. Data on various types of Allis-Chalmers indoor and outdoor current transformers, indoor and outdoor potential transformers, and outdoor metering units are contained in a new 32-page bulletin, No. 61B7100, "Allis-Chalmers Instrument Transformers," available from Allis-Chalmers Mfg. Co., 2115 So. 70th St., Milwaukee, Wis.

1023—Protective Control Centers. Information and price lists on a new line of combination protective control centers are contained in Bulletin #18, "Bullfog Pushmatic and Pushmatic Electric Centers." Bullfog Electric Products Co., Box 17, Roosevelt Park Station, Detroit 27, Mich., has made the bulletin available.

1025—Electrical Merchandise. Knox Porcelain Corp., P. O. Box 2053, Knoxville 1, Tenn., has available a 32-page catalog with data illustrating their complete line of wiring devices, neon sign insulators, radio interference suppressors, standard electrical porcelain, telephone insulators, switchboard jack sockets, and strings and strips, insulators and special porcelains of all sizes.

ELECTRICAL SOUTH,
806 Peachtree St., NE
Atlanta 5, Ga.

May, 1950

Gentlemen:

Please send me the bulletins and catalogs indicated.

(Print Plainly)

Name _____ Title _____

Company _____

Address _____

City & State _____

Circle numbers below. Bulletins and catalogs will be mailed promptly.

1001	1003	1005	1007	1009
1011	1013	1015	1017	1019
1021	1023	1025	1027	1029
1031	1033	1035	1037	1039
1041	1043	1045	1047	1049
1051	1053	1055	1057	1059
1061	1063	1065	1067	1069
1071	1073	1075	1077	1079
1081				

Next month!

Revolutionary development that will ROCK the INDUSTRY

FEDERAL NOARK

Federal Electric Products Company, 50 Paris Street, Newark 5, N. J.

1027—Fluorescent Fixture. Complete catalog describing development of the Schanlite, a fluorescent fixture especially designed for school and commercial applications, is available from The Kadjar Co., 2480 E. 22nd St., Cleveland 15, Ohio.

1029—Wiring Devices. Catalog No. 49, "Lutron Wiring Devices," listing over 100 wiring devices including the new improved Lutron-switch, has been released by Slater Electric & Mfg. Co., Inc., 76th St. & 37th Ave., Woodside, N. Y.

1031—Heating Units. The new Chromalox Catalog of Industrial Electric Heaters, Catalog 50, is available from Edwin L. Wiegand Co., 7609 Thomas Blvd., Pittsburgh 8, Pa. Four basic Chromalox units, strip, rings, tubular, and cartridges, with wide variations in wattage, voltage, and sheath material, are listed, as well as size selection and application data.

1033—Wiring Devices. Slater Electric & Mfg. Co., Inc., of Woodside, N. Y., have added some additional devices to their catalog and price sheets. New inserts are available showing an improved ceiling receptacle with double contacts, and also wall mercury switches.

1035—Electrical Fittings and Devices. Buchanan Electrical Products Corp., 1260 Central Ave., Hillside, N. J., offers a 12-page catalog covering solderless connectors, cable and conduit fittings and wiring devices. It contains complete data on "Splice Caps" and "Terminal" lugs for wire splicing and terminating, box connectors for metallic and non-metallic sheathed cable, both plain and insulated conduit bushings, conduit locknuts, knock-out plugs, terminal blocks, attachment plugs, fine pullers, etc. Suitable illustrations, dimensional data, and application information are included.

1037—Lugs, Connectors, and Accessories. A new manual on electrical lugs, connectors and accessories has been issued recently by Ilsco Copper Tube and Products, Inc., Mariemont, Cincinnati 27, Ohio. The manual contains photographs in color, technical data for use and installation, engineering information and a thorough compilation of dimensions, ampere ratings, wire sizes, weights and descriptions and other useful material.

1039—Switches and Guards. Newly released 32-page, two-color Catalog No. 49, of the McGill Manufacturing Co., Inc., Valparaiso, Ind., contains complete descriptions of Tevolite switches, McGill lamp guards, and McGill electrical specialties.

1041—Cabinets and Boxes. The complete catalog sheets comprise a new catalog available from R & C Metal Stamping Co., P. O. Box 56, Station D, Atlanta, Ga. The catalog is divided into three sections: products for electrical applications in general, products for the utilities and the R.E.A., and products for appliance distributors.

1043—Church Lighting. The Edwin F. Guth Co., 2615 Washington Ave., St. Louis 3, Mo., has released a new catalog on Artistic Ecclesiastical Lighting for Churches. The new catalog illustrates church lighting equipment and lists complete details. Write the Guth Company for a free copy.

1045—Electric Connectors. General Electric Co., Schenectady 5, N. Y., has announced a booklet describing a complete new line of solderless electric connectors which accommodate a wide range of conductor sizes. The new line is completely illustrated and diagrammed. This booklet is available from the Apparatus Dept., General Electric, in Schenectady.

1047—Lighting Fixtures. Kadjar Co., 2480 E. 22nd St., Cleveland 15, Ohio, has made available from new catalogs "Lux and Colorful" gives the company's residential lighting fixtures, "Kadjar Commercial Lighting," Catalog 48, illustrates fluorescent and incandescent fixtures, "Kadjar Trofflite" and "Kadjar Sunlite," Catalog Supplements Nos. 48A and 48B, give important data about these units.

1049—Incandescent and Fluorescent Fixtures. Catalog No. 46, "Neolight, Incandescent and Fluorescent Lighting," has been issued by Regent Neon Elec. Mfg. Co., New Rochelle, N. Y. Both industrial and residential fixtures are shown.

1051—Air Cooled Transformer. Bulletin No. 43 W of Electrical available from Marion Transformer Co., Inc., 74 Montgomery St., Hillside 5, N. J., gives complete details on the company's new air cooled distribution transformer. Designed for indoor or outdoor use, the new transformer utilizes horizontal core and coil assembly which makes it to potential accidents and changes the use of oil or other liquids.

1053—Busbrabation Duct. This 32-page bulletin, No. 107, issued by Building Electric Products Co., Inc., Detroit 32, Mich., describes in detail the Building Feeder and Plug-in Busbrabation Duct for low cost electrical distribution. The bulletin is profusely illustrated. The same drawings included show details of the duct, the various fittings, and the Sampson-type plug-in disclosure of complete systems.

1055—Electrical Freshout. A compilation of recent developments in the application of the Electric Freshout distribution system is applied to portable lights and tools, moving test lines, cranes, and hoists, and other industrial applications is offered in the new 32-page catalog No. 50, now available from Goodall Corp., 125 Rowley St., New York 7, N. Y.

1057—Electrical Apparatus. This 24-page illustrated catalog shows electrical solderless terminal lugs, solderless wire connectors, fuse clips, and many other electrical items. Published by Ilsco Copper Tube & Products, Inc., Cincinnati 27, Ohio.

1059—Wiring Devices. A 64-page catalog No. 45, Wiring Devices and wiring device index and list price sheet describing the line of wiring devices manufactured by Eric & Seymour, Inc., Syracuse 9, N. Y. All caps, receptacles, associated with switches, fixtures and the different types of devices, switches, convenience outlets, sockets, etc., have been grouped.

1061—Fluorescent Fixtures. A catalog containing full information, engineering data and light output charts for the complete line of commercial and industrial fluorescent lighting fixtures and units is available from the R. & W. Wire Co., Rutland, N. Y.

1063—CSP Transformers. Forty pages of facts and figures, data and photos on "CSP" transformers in actual use comprise the booklet B4745, "50 Case Histories of "CSP" Performance," issued by Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa. The booklet covers three basic types of case histories: lighting, protection, thermal protection and heavy duty.

1065—Engine Driven Plant. A new catalog sheet, Form 1549, "Kalbright Gas Engine Driven Plants," is available from the Kato Engineering Co., Mankato, Minn., describing the 300 watt and 500 watt AC plants and illustrating each.

1067—Code Call Systems. A 6-page bulletin describes means of speeding up intercommunications throughout inside or outside premises. Calls are made by a numerical code sounded on bells, chimes, horns, or other signaling devices. Bulletin No. 5 is available from the Signal Engineering & Mfg. Co., 114 W. 14th St., New York 11, N. Y.

1069—Lighting Fixtures. An 8-page bulletin, No. 123, on Swyrlite Lighting Fixtures has been announced by Swyrlite Co., Inc., 305 Irving Pl., New York 3, N. Y. The bulletin is well illustrated and describes features of each fixture in detail.

1071—Plugs and Receptacles. Additional loose leaf sheets for insertion in the Pyle Catalog 1100 are available from the Pyle National Co., Chicago 51, Ill. These pages describe a wide range of plugs and receptacles for special purposes.

1073—Lightning Protection. Complete with graphs, diagrams and illustrations, "Modern Concepts of Lightning Protection for Transmission and Distribution Systems," by H. M. Dowie, is available from the Apparatus Dept., General Electric Co., Schenectady, N. Y.

1075—Switchgear Equipment. A 48-page revised bulletin, GEI-1276A, "The Purpose and Use of Electrical Diagrams Supplied with G. E. Switchgear Equipment," is available from the Apparatus News Bureau, General Electric, Schenectady 5, N. Y. The bulletin contributes a practical guide for those who should equipment to maintain switchgear.

1077—Electric Control Devices. Wall Industrial Electric Co., Mount Vernon, N. Y., has available an indexed loose-leaf notebook containing general information, price sheets, and descriptions of electric control devices. Convenient tabbed separator sheets make it easy to locate data in the various sections of the book. Contains specifications, dimensions, wiring diagrams, etc., of the best existing devices, showing the complete line of electric control and accessories.

1079—Connectors. A 24-page illustrated catalog describes K & H solderless terminal lugs and connectors may be obtained from Krueger & Hudepohl, 5 East Third St., Cincinnati 2, Ohio. A wealth of information including specifications, descriptive material and illustrations are included.

1081—Busbar Data. Various applications of the EA busbar for industrial purposes are illustrated in this 11-page bulletin made available by the Frank Adams Electric Co., St. Louis, Mo.

Top Management:

YOUR BOOST IS NEEDED MOST

IN THIS CAMPAIGN TO BUILD *EVERYONE'S* INDEPENDENCE

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This is your country—and it's *your Drive*. Help to put it over! All the material and assistance you need are available from your State Director, Savings Bonds Division, U. S. Treasury Department. Remember—employees *appreciate* Payroll Savings.

The Treasury Department acknowledges with appreciation the publication of this message by

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Not Merely a few **Covers**

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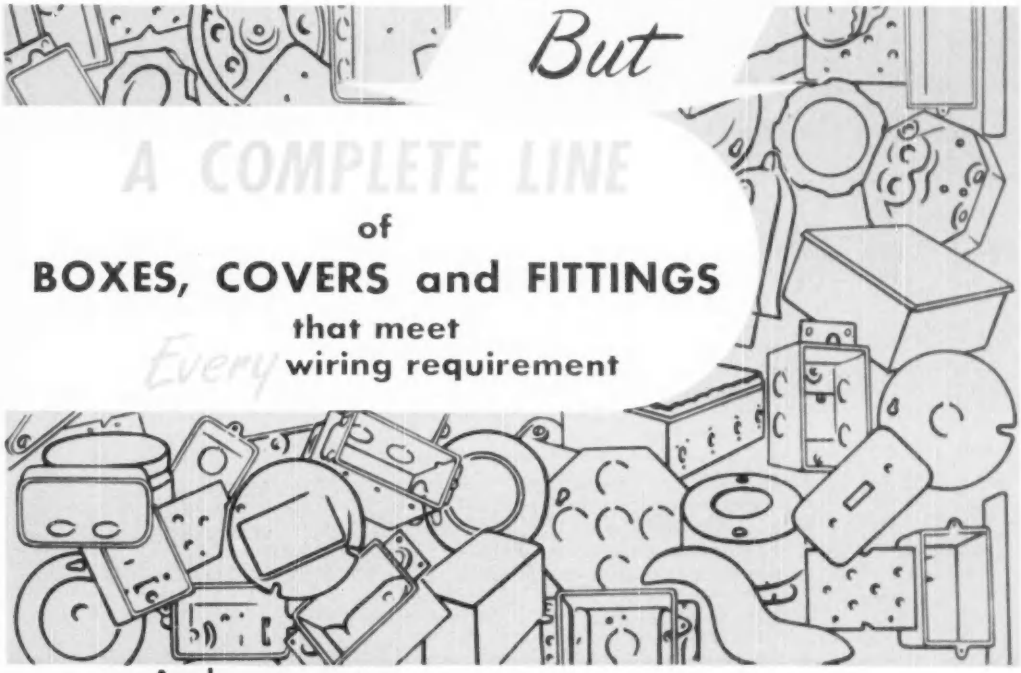

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A. Decidedly. Improperly designed ballasts can lower lamp life by as much as 1,000 hours in a 40 watt lamp. CERTIFIED BALLASTS assure full lamp life.

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Q. Do some ballasts last longer than others?

A. Yes. A CERTIFIED BALLAST should outlast the life of the installation.

Q. Can ballasts be a source of noise?

A. Audible "humming" is often due to the ballast. CERTIFIED BALLASTS produce a minimum of noise.

Q. What ballasts are made to exacting specifications, then tested and checked by Electrical Testing Laboratories, Inc., who certify that they conform to these specifications?

A. CERTIFIED BALLASTS!

Q. Who makes CERTIFIED BALLASTS?

A. Any manufacturer who wishes to produce ballasts that meet the specifications may participate in the CERTIFIED BALLAST MANUFACTURERS program. Currently 10 leading ballast manufacturers are producing CERTIFIED BALLASTS.

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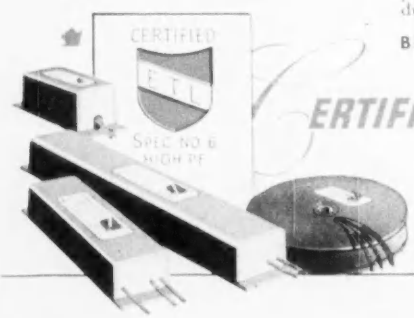

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Southern Electrical Corporation

CHATTANOOGA, TENNESSEE

ELECTRICAL SOUTH

VOL. 30 MAY 1950 NO. 5

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FRANCES J. BLACK, *Assistant Editor*

BARON CREAGER, *Southeastern Editor*
1305 National City Bldg., Dallas, Tex.

T. W. McALLISTER, *Exec.-Pres., Editorial Director*

FRANK P. BELL, *Business Manager* — J. A. MOODY, *Production Manager*

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Business Representatives

J. A. Atkins, Jones — Sheridan Bldg., 1st & W. Monroe St., Chicago
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OUR RESPONSIBILITY – AND YOURS

No. 1 in a series of editorial messages

THE primary objective of a business or industrial magazine is to furnish trade or technical news and information to the special field which it serves. Its sphere of editorial activity is usually limited to that special field. Political or general economic developments are not regarded as coming within that sphere; but, rather, they are developments to be explored and interpreted by the newspapers and general magazines.

With no apologies but with what we feel is a necessary explanation, we are now venturing to step outside that limited sphere of editorial activity—to the extent of one page in each issue devoted to what we regard as the gravest menace confronting our readers.

That menace might be termed socialism, it might be termed statism, it might be termed the "welfare" state. But, in a general way, it might be summed up as the growing tendency to expect or permit government to do for us the things which we should do for ourselves. In turn, that means the gradual development of an all-powerful central government, with more and more governmental controls; with an ever-increasing portion of the national income turned over to the tax collector; and—of necessity—with the gradual loss of individual freedom and opportunity.

What is this thing which we refer to as socialism? At a recent southern convention a speaker aptly described it as the system in which the government says: "Give me more and more of your earnings or property so I can take more and more care of you (I don't trust you to take care of yourself) after I have taken care of myself and my friends."

Now social legislation is not necessarily socialistic—as, for instance, where social security measures are financed by payroll taxes, are held within reasonable bounds, and where the primary objective is not redistribution of income but spreading of individual income more evenly over a period of time. But it can be carried to the point where it becomes definitely socialistic. That point is reached when it absorbs so large a portion of the national income as to offer a definite threat to our system of private enterprise. And that point *can* be reached under our existing welfare programs.

Within another generation, according to conservative estimates, our present welfare programs will be absorbing as much as 18% of the covered payrolls. That this estimate is not unreasonable is evident in the fact that already the payroll tax of the railroads is more than 15%.

And on top of that, we are now asked to approve socialized medicine—the ultimate cost of which is unknown, but it certainly would amount to many additional billions of dollars.

In addition to more and more government controls through welfare programs, socialism proposes to control the means of production through nationalization of basic industries. Its ultimate aim is the virtual elimination of our present system of private enterprise. This, as pointed out recently by James F. Byrnes, "socialism is but a step toward communism."

Already we have gone far down the road of socialism. In addition to expanded welfare programs, we have legislation which pushes up wages to uneconomic levels, we have vast government housing projects, we have rent control, we have control of interest rates, we have government head-over-heels in electric power production, and we have vast government subsidies and payments to the extent that an average of one adult American in every six now receives *regular* checks from the government.

Because we feel it is so grave a menace which confronts all of us, we propose to devote this page in the next several issues to more detailed discussion of various phases of the problem.

This is *our* responsibility. We realize, of course, that many of our readers will be entirely familiar with the story. But we hope that by covering the subject in this way, we may be furnishing material which our readers can use in carrying the story to their employees and associates. That is *your* responsibility.

Selling Light

A contractor who has sold lighting successfully tells why more adequate lighting installations are not made, and suggests the right approach

by H. L. Robinson

Co-owner, Mann Electric Co.
Houston, Texas

A CORRECTLY LIGHTED retail store is unfortunately referred to as an "unusual lighting job." Yet it is a fact, though hard to admit, that they are rarely found.

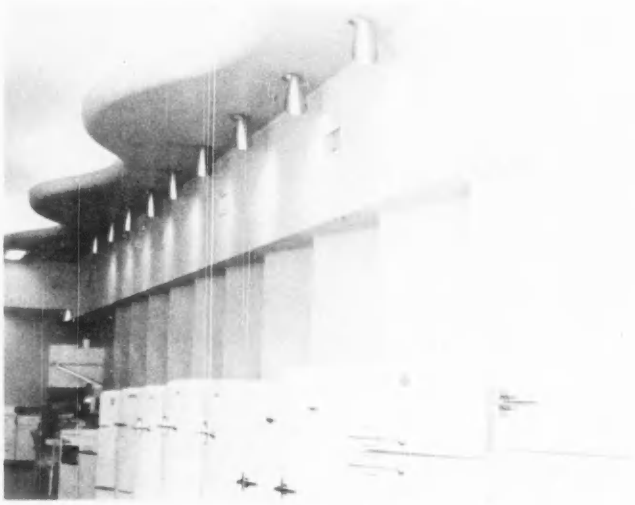
I place the blame for this condition equally with the retailer and the contractor. First, the retailer is hard to prove convincing; second, the contractor doesn't entertain the thought of doing a selling job.

Frankly, few retailers know what they need. They vaguely know what they want, but can't express themselves. They have been taught the economy of fluorescent lighting in comparison with incandescent. That is, they have been told this in terms of wattage. As a result, fluorescent fixtures have been sold on this one point. The trouble is that not enough were sold to complete the job as the average retailer would have liked it after the installation had been completed.

At this stage of the game, more and more alert retailers are already overhauling their lighting arrangements. A few retailers are making certain beforehand that their light problems have been solved on the drawing board before a piece of wire is touched.

Let's see what the retailer wants with light. If we go on the assumption that he wants only to see in getting around his store, we can dismiss him by hanging a few fixtures here and there whenever it is most convenient to do so.

But let's take the merchandising minded retailer. He is going to tax our ingenuity to the utmost. He is going to buy lighting just as he bought his other fixtures. They must have,



A modernistic ceiling and wall effect plus a row of spots enhance the refrigeration department. The spots are directed at the tops of the refrigerators, yet note the more than adequate illumination on the sides and fronts.

(Left) Because of the excellent lighting job done on this store, it is the entire block's focal point, and stands out conspicuously from other stores. To light the interior, which measures 75 feet by 30 feet with 15-foot ceilings, a total of 1,700 feet of fluorescent tubing was used, plus 40 spots containing 75-watt bulbs. Over 7,000 watts are used in illuminating the shop.

along with functional and merchandising value.

Eye retailers use counter top tables to display their merchandise. Therefore, a lighting arrangement that only lights the tops of the displays are of little value to him. He will want sufficient light to enable his customers to see the sides of the packages which are displayed on shelves or tiered units that are in the aisles.

It is common knowledge that light intensity falls off with the square of the distance from the source. Accordingly, then, if we know the number of foot-candles needed at a given point, all we have to do is determine the distance from the fixture to achieve at our conclusion. That would give us the correct illumination, wouldn't it?

No. It isn't that simple. We have not taken into consideration the area light travels in a straight line only. Light rays travel thus, but we have diffusion, deflection, and reflection to contend with.

It has been proven to everyone's satisfaction, I believe, that fixtures hung low from a high ceiling proved inadequate. Placing the light source closer to the floor did not solve the problem—unless some means of lighting the area was employed. This was usually accomplished by installing

H. L. Robinson, co-owner of Mann Electric Co., of Houston, tells how the electrical contractor can promote more lighting sales.

a floating ceiling. If the walls could have been painted to reflect the area, the same results would have ensued.

There are some retailers, due to the nature of their business, who favor a low ceiling. But this is not practical for all. High ceilings offer advantages. They make a room appear more spacious, give a better circulation of air and add an atmosphere of dignity, so to a lesser, but not enough.

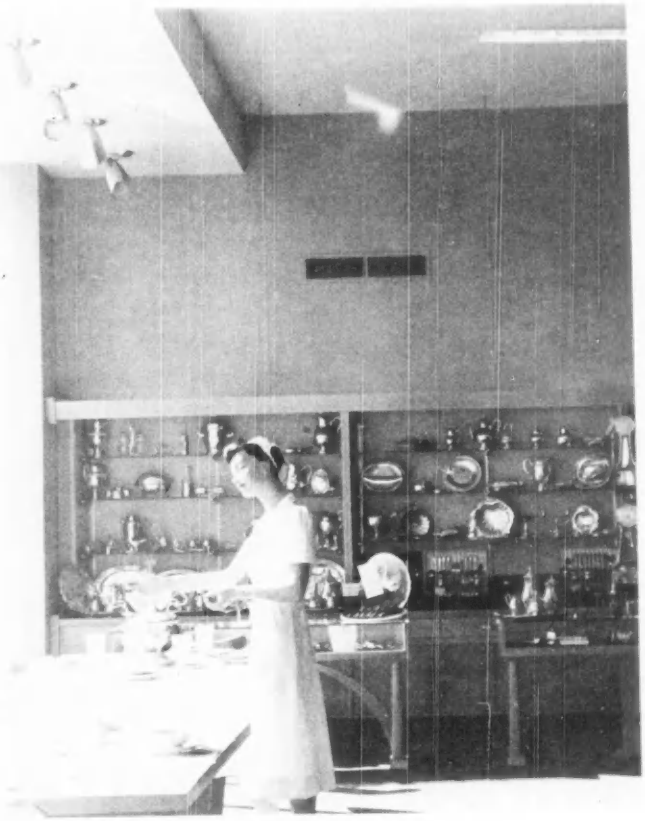
In such cases, there is nothing to do but install enough lamps to do the job. And what do we mean by "do the job"?

As I have already stated, the retailer wants only just light to enhance his merchandise. The retailer accepts as dictum that well-displayed merchandise is better than half sold. And no merchandise can be well displayed in a dimly lighted store. The store must be brightly lighted, without its being glaring. A store must be lighted to the extent that items will be lighted to subvert traffic passing by. When the inside of a shop looks like a black hole, it attracts few people. And remember, today very few stores are open for business after dark. Then there must be lighted for daylight hours, first of all.

If you have noticed a great many of the chain stores who are alert to the modern trend in merchandising are doing away with the old type window. They are no longer beautiful in attire, but open right into the store and the store itself becomes the window display, both day and night.

Many independent retailers are feel becoming aware that their windows and window lighting are all wrong. There are many retailers who fail to have their window lighting [illegible]

(Continued on page 30)



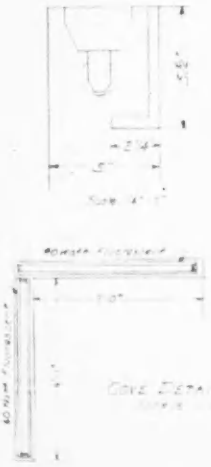
Light puts the accent where you want it, and in this display, the table setting was to be the center of attention. Overhead spots accomplish the desired result. Note that items on the wall shelves are amply lighted, even from a distance, but your eye automatically goes to the model because this is the brightest spot.

Home Lighting Ideas

Some practical suggestions for "tailored lighting" in homes are to be found in Sylvania Electric Company's Electric Center

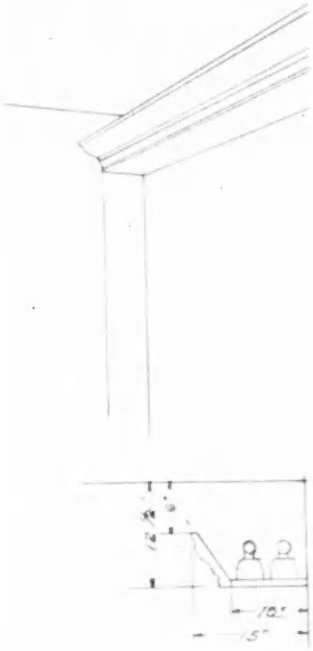
LIGHTING A MAN'S DEN

This man's den demonstrates how, by means of light, color and economy of space, a small 5' x 9' room can be utilized to advantage. Each of the built-in trophy cases on either side of the desk are illuminated by a single 20-watt fluorescent lighting fixture mounted on the ceiling. The lamp is set 8" above the edge of the molding which acts as a valance to conceal the lamp. General lighting for the room is furnished by 40-watt fluorescent fixtures mounted on the ceiling along the sides of the map-covered walls. A 6" deep cornice (left), extending approximately 5" out from the wall shields the fluorescent lamps. An additional single lamp 20-watt fluorescent fixture is concealed in the trophy case, a section of which can be seen at the left. The portable incandescent table lamp contains a 100-watt bulb for close work at the desk.



This section of a master bedroom demonstrates three decorative ideas for using light functionally and decoratively. The 10" deep overhead cove, stretching the length of one wall, contains two rows of 40-watt fluorescent lamps and provides general illumination for the room. Together with the 30-watt fluorescent lighting fixture attached to the top of the niche over the bed, this lighting furnishes an average of 25 foot-candles for reading. A frosted glass panel shields the lamp in the niche. Shelves built into the wall on each side of the bed holds books, radio, glass and water pitcher, as well as other accessories. A tubular 40-watt incandescent frosted showcase in a porcelain socket is attached to the wall beneath the first shelf in each section and illuminates the shelves, adding a decorative touch to the bed area, and making efficient night lights.

MASTER BEDROOM
DECORATED WITH LIGHT

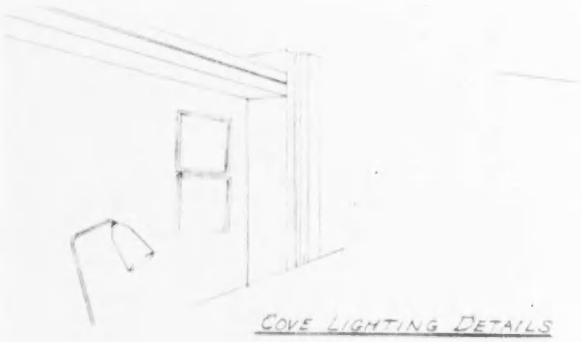


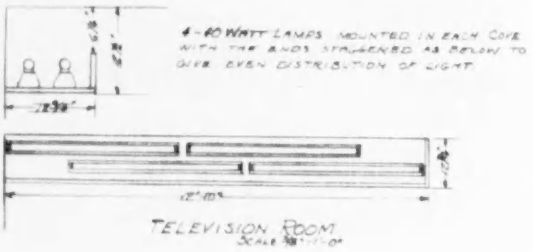
BEDROOM COVE
SCALE 1"=1'-0"

Designed to save space and suit the needs of a busy couple, this master bedroom features built-in furniture and lighting. The lighting is concealed and used as part of the decor of the room. Focal point of the room is the dressing table flanked on both sides by full length mirrors which form the doors of two large closets. Fluorescent strip lighting fixtures are set back of the frosted glass panels around three sides of each closet to supply an average of 25 foot-candles of uniform, shadow-free lighting for dressing and applying makeup. One 30-watt lamp is placed at the top of each mirror, and the side panels are made up of one 40-watt and one 20-watt fluorescent lighting fixture mounted vertically in a continuous row. In addition to creating an unusually decorative effect in the room, this lighting also illuminates the insides of the closets. A hinged wooden panel covering the lamps from the inside of the closet protects clothes from discoloration when the mirrored doors are closed. A 30-watt fluorescent lamp mounted on the ceiling over the window behind the drapery valance gives additional light for the dressing table and completes the pattern of illumination in that area. General illumination and light for reading in bed comes from two rows of 40-watt fluorescent strip lighting fixtures recessed in a 10" deep cove stretching the length of one wall. This cove, together with fluorescent lamps recessed in a niche above the bed, gives comfortable light for reading. Together these two units furnish 25 foot-candles of light on the bed.

LIGHTED SNACK BAR

How an alcove or small space on the second floor of a house can be made into a useful area is shown in this upstairs snack bar or kitchenette. Handy for preparing a quick bite late in the evening, or for heating a baby's formula, this unit in the new Sylvania Lighting Center has a spacious counter, a grille and small refrigerator concealed behind doors under the counter, as well as cabinets and shelves for food, dishes and electrical appliances. One 40-watt fluorescent strip lighting fixture is mounted at the bottom of the overhead cabinet, with the edge of the cabinet extending down 5" to form a shield for the lamp. This lighting provides a high level of uniform illumination on the counter area. To light the shelves at either side of the alcove, 40-watt incandescent bulbs are recessed 5½" into the ceiling above.





INDIRECT LIGHTING FOR TELEVISION-SITTING ROOM

Lighting for a conversational atmosphere and for watching television is illustrated in this modern living room. Dropped 12½" from the ceiling, a cove 13" deep extends along one wall and contains two rows of standard single lamp 40-watt fluorescent lighting fixtures which furnish a lighting level of 10 foot-candles throughout the room. The four fixtures are staggered to give an unbroken line of light with no dead spots between the fixtures. The intensity of the lighting is low enough for watching television in comfort, and makes pleasant illumination for conversation, dining or entertaining. Because the source of the light is hidden, no light reflections interfere with the picture on the television screen. For use as a sitting room, the sectional furniture can be moved as desired and made to form one long couch for an overnight guest. The folding wall partition (right) leads into a modern type bedroom.

Program Case History on

Adequate Wiring

by J. M. Mooney

Wiring Consultant
Louisiana Power & Light Co.
New Orleans, La.

"Into 1945 from ending with 1944 covered a period of substantial growth for our company as a supplier of electric and gas service. During that time, including the living war years, Louisiana Power & Light Company more than tripled its electric customers. The number of homes with inadequate wiring, including the range from the small lazy-type structures to the large antebellum plantations, kept pace with customer growth.

The postwar building boom, as well as the pent-up desires for more and better electric appliances induced by wartime shortages, intensified the growing problem of inadequate wiring. Our problem was heightened inasmuch as we serve a predominantly rural territory. There are no large cities in our area.

In our preliminary steps we carefully surveyed the program as operation by other companies. We considered the material available from the National Adequate Wiring Bureau, manufacturers, and others in the electrical industry. Since it was planned that the program would be carried out entirely by the present sales force, we contacted our sales and supervisory people, who would ultimately be responsible for the implementation of the program, for their ideas on how we might best cope with our problem.

This fact depicted the dual result of uncovering some helpful suggestions and, more important, of interesting our sales people in the point of complete acceptance and enthusiasm.

Our campaign was to be directed towards four goals: to educate our customers to a more complete understanding of its main benefits, and to motivate them into action with regard to installing adequate wiring; to carrying out this campaign, we are offering our assistance to the home wiring contractor by helping to break down the sales resistance he meets. A home wiring contractor working alone, faces a hard sell selling adequate wiring to the people in our area. Back-up is our program and tying in with it offers him the help he needs.

Promotional Materials Used

To get the story across to the all-important customer, the following advertising and promotion media were employed.

Newspaper Advertising — 70 inch advertisements which dramatized a predominant inadequate wiring and the solution, adequate wiring, and offered the free services of our sales people to assist customers in planning proper installations were used. The advertisements appeared in 45 weeklies throughout the territory.

Hand-Out Material was purchased from the NAWB and manufacturers and was distributed to customers from district offices, group meetings, demonstrations, fairs and contacts by the sales people.

Training Material—A set of the NEMA Consultants, Inc. of the lady chrome slides from the NAWB, film strips including "Worst for Life" and "Brave Electricity," the film "Dream of Better Living," scale model farm and home wiring boards and colorful diagrams were provided our sales people for use in conducting dealer meetings and meeting for P.T.A., F.F.A., 4-H, Veteran, Church and School groups.

Skits—two wiring boards were built which represent 1890 to 1920 wiring in kitchens. A humorous, fifteen minute presentation highlighted the inadequacies and calculated occurrences with old wiring and the convenience and economy resulting from adequate wiring. The skits were used at dealer's sales shows and various group meetings.

Visualizer Sales Albums were furnished to our sales people in which they place photos of adequate wiring installations, sketches, and testimonial letters. These provide an excellent visual sales tool to contacts with customers who desire help in planning adequate wiring.

District Office Displays which dramatically present side-by-side inadequate wiring to "wrong" and side adequate wiring to "right" were used in many of our windows. The displays were small and portable to facilitate movement from office to office. These were supplemented by colorful decals and counter cards purchased from the NAWB, which were supplied to all district offices.

We make extensive use of space in NAPCE Service, our monthly house organ, to keep employees posted on our activities. This is supplemented by programs in district offices in which we use wiring boards, films and slides. This activity has created an interest among many of the employees and they are now alert for our prospects which they can secure and bring in for our sales people.

Public Bulletin, our monthly dealer publication, carries numerous articles designed to keep the dealer mindful of the fact that the efficient operation of appliances is dependent upon the installation of adequate wiring.

One of our rural service representatives recently conducted an appliance show for a dealer and gave adequate wiring a very prominent place on the program. The NAWB slides were used and since the customers in that area speak French, the script was translated and presented in French.

Another rural service representative recently made a team with a farm agent and, with the aid of the kitchen wiring board, put on a demonstration in farm homes to groups of from 20 to 40 home owners. His total attendance numbered over 50.

Small Group Meetings Best

Programs like the above mentioned are carried on whenever and wherever it is possible to get a group together. Our experience has been that the small informal group meeting tends to hold the interest of those in attendance and result in many good questions and discussions.

To motivate the customer into action with regard to installing adequate wiring, we felt that it was necessary to have a sales tool that would develop the interest and active participation

(Continued on page 47)

Mr. Mooney's presentation on how to sell adequate wiring in rural areas was presented at the Adequate Wiring Conference in St. Louis, Mo.

This headquarters staff of Carter Electric Company, Augusta, Ga., keeps six to eight crews, totaling 40 workmen, busy in industrial plants in the Southeast. Left to right are Ray Kitchens, vice-president; Miss Vera Scott, secretary; and C. E. Carter, president.

Serving Industry

by Rolling Branham

Many electrical contractors are interested in handling industrial work but find it difficult to get started. Here is an "experience" story describing the "know how" of industrial electrical contracting.

There are some definite organizational reasons behind the success in the industrial field of such firms as the Carter Electric Company, 625 Ellis Street, Augusta, Georgia, which does more than 50% of its $300,000 annual volume in industrial contracting, mostly in textile mills within a 200 mile radius of Augusta.

And this licking of operational problems has helped the firm become near reaching its aim of making 20% net profit on that volume.

The basis of the success lies actually in the simplicity with which the firm is organized, a simplicity which might be a model for many firms who have over-lapping duties. Only four persons are in the office personnel of this company: a receptionist-secretary and the three officers of the company: C. E. Carter is president; Ray Kitchens is vice-president, and Miss Vera Scott is secretary-treasurer.

An average of 40 men, divided into six to eight crews, who are on as many jobs at one time, work for the company out in the field.

Each crew has a truck, and each truck is completely equipped with all necessary tools and equipment, and small supplies. His own electrical supplies for the particular job on shipped directly to the job site, eliminating any need for extra storage space and handling at the home office in Augusta.

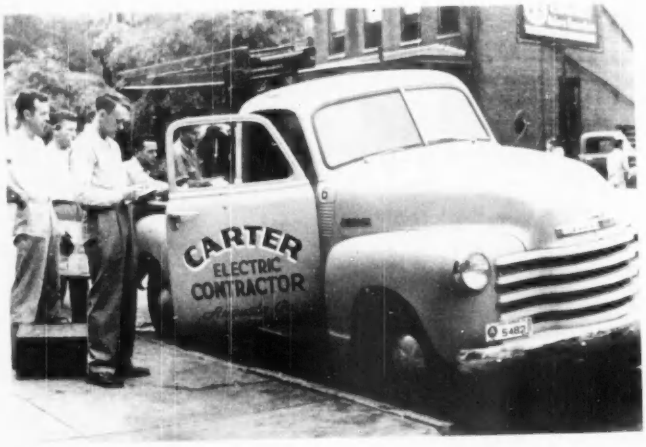
In addition to the Carters, office

tions with his men, plus a regular training program that introduces five or six new men into the company every year, has gained the company that each workman is a competent workman, able to be trusted to work alone on nearly every kind of job. A foreman in each crew works on an incentive basis, which gives him a five per cent bonus if the profit on the job is good, and most of the foremen have been with the company more than half a dozen years.

What about this training program? Carter is careful in his selection of young men and usually puts one new man in with each crew in the course of a year. During the first year, these men are changed from one crew and one job to another so that they will get experience in all phases of work the company does. Each trainee, who is already a high school graduate, is encouraged and aided in taking correspondence courses and other technical training.

"I try to get around to check on each job personally about every two weeks," Mr. Carter says. "And yet our organization and training system

(Continued on page 54)



This typical Carter Electric crew is about to leave Augusta for a job in a nearby textile mill. Well equipped trucks and self-sufficient, well-trained operating crews spell out two of the principal factors in this company's successful handling of industrial electrical contracting work.

A-W Demonstration

by W. R. Walker

Agricultural Engineer
Tennessee Valley Authority
Chattanooga, Tenn.

The increase in sales of appliances from wiring and the income changes in recent years by reports there are being demonstrated dramatically in the TVA area through the use of the specially designed panel shown in the accompanying illustrations. Although we call it the "time wiring panel" the wiring knowledge applies to any electrical user.

On each side of the panel board is an Ansley to show the three sizes of services rated at 30, 60 and 100 amperes, and the number of circuits and outlets which they will supply. Outlets are shown as tiny lamps on the circuits. The appliances used on these circuits are also shown in miniature.

The other half of the board shows what happens when a circuit is overloaded. A single circuit with No. 14 wire is shown with 10 outlets on a lighting circuit. In a little skit about "The Jones Family," the operator follows the movements of the family as they go from one part of the home to another and use electricity at various outlets on the circuit.

The load goes from 0 to 2470 watts. As the "Mr. Jones" burns a 75 ampere fuse replaces it with a 20 ampere fuse, replaces it with a penny, this causes the unit to start smoking and the switch fire. During this occurrence the voltage drops from 120 to 110 volts. The best candles of light produced by the lamp drops from 30 to 25 foot candles. These things are carefully pointed out to the audience.

The condition is then corrected by using No. 12 wire and shedding the overloaded circuit. With four watts of lighting the demonstrator shows that there is a voltage drop of only 2 volts and a lighting drop of only 2 foot candles.

Following is a more detailed description of the demonstration panel and the method of conducting the demonstration.

The Panel

The dimensions of the panel are 4' x 5'10" x 14" when folded. This is the largest dimension that will fit between the sidewalk and wall of the office panel showers. The two sections are hinged with a heavy duty piano hinge. Each section is 1' x 5'10" x 7". The "" rectangle is 1'10" square. The back and front is of 1/16", heavy pebboard, 4' x 5'10". The front is detached perimeter, and is screwed 2" so that there will be clearance when the panel is closed. The back is detached with good screws so that the components can be maintained. Two double convenience outlets are staggered on the hinged end for power supply. A jumper connects the two sections.

Suitable handles for carrying are placed at convenient level on both sides when the panel is folded. The idea is optional.

The Service Side

Three types of services are shown on the service half of the panel. The 30 ampere 1 ph SS with two circuits is divided total. The current the conference panel provides six outlets, two of which is 1 slotted double convenience outlet, is energized at all times. The fifth outlet is represented by Mazda 1-4 ft main lamp, 6 watt. This circuit is controlled by a switch.

In the photograph at the top of the page the author is shown with the special demonstration panel.

A part of the demonstration at this point consists of comparing the U-slotted receptacle with a Non-UL approved competition grade receptacle which will not hold a plug. Also U-rated switches, U-rated, 3-way and U-rated mercury switches are compared to poor switches. Then, to dramatize the use of drop cords and pull chains, a short length of cord with plug, brass shell, pull chain, and lamp is plugged into the outlet. This demonstrates (1) the glare from the bare bulb, (2) the unsightly appearance of the drop cord, (3) the cheap construction of the brass shell (a few replacements would cost more than a wall switch) and (4) the danger of the brass shell when defective.

Outlets Get Emphasis

I also emphasize the importance of having plenty of outlets, pointing out that *all appliances* plug in except the overhead lights!

The convenience outlet circuit must be No. 12 wire. No. 12 is the minimum with 15 A. This audience is told that a 20-amp fuse may be used to protect the circuit, nothing larger.

The other circuit provided by the 40-amp entrance is the lighting circuit. The maximum number allowed by the Code is shown, although we recommend eight outlets. It is protected by a 15-amp fuse. The audience is told that on any circuit having fixed lamps a 15-amp fuse is the largest allowed. This circuit, as is each other individual circuit on the panel, is controlled by a switch. Also, a master switch controls *all* the circuits on the 40-, 60-, and 100-amp panels.

We emphasize that the 30-amp entrance is not recommended for the home. It is recommended for the small outbuilding or for a small range or water heater circuit.

The 60 or 70-ampere capacity service is next described. This is recommended for the small farm. It has a convenience outlet circuit and three lighting circuits. In addition, it has 240 volts for the stove and water heater. The 240-volt appliances are emphasized by being placed over a bull's eye which is illuminated when the circuit switch is turned on. Also, small 5-watt frosted lamps are placed behind the plastic appliance models which illuminate them when the circuit is energized. A multi-breaker is used for this service and the operation of a breaker is explained to the audience.

The 100-ampere capacity service is shown on the service side of the board as a panel made by Westinghouse with a 100-ampere main disconnect, two 60-ampere subfeeds, and eight lighting or convenience outlet circuits. Service from this panel could be provided in a number of ways. The way shown on the board is as follows:

One 60-ampere subfeed is here to provide up to 7½-hp motors, lights, etc. (Bulls eye and motor shown).

The other 60-ampere subfeed is provide service to a 60-ampere panel in the house (to show this, the master switch on the 60-amp is flipped on).

The remaining eight 30-amp maximum fuse holders are used as follows: two for 240 volts for the water system, one for outside lighting, two for additional lighting and convenience outlet circuits, and three spare circuits for future use. Shown over the bull's eyes are an automatic washer and an ironer which possibly might be used later. The third spare shown is used to feed some small outbuilding, and this is demonstrated by flipping on the master switch on the 30-amp.

As demonstrated, the 100-amp service provides service for all the outlets shown on the panel. Recommendations on wire sizes to all appliances are made. Also the alternative, and in many cases more desirable, meter pole type of installation is shown in a chart. The farmer is also told that for still larger farms 200- and 400-ampere capacity services are available.

The Overloaded Circuit Side

Essentially, the wiring for this half of the panel consists of four circuits, both lighting circuits. We will call them the "Bad" circuit and the "Good" circuit. Both circuits are fed through a disconnect with a single fuse holder. The feed from the fuse feeds a double pole, double throw toggle switch. By means of this switch the circuit can be switched to either the "Good" or the "Bad" circuit. Both circuits are series circuits, and both are designed around a fixed load of 500 watts. The 500-watt load consists of a table lamp, 200 watts, and the lamp in the photoelectric light meter, 100 watts. A voltmeter is across the line at the lamp.

The total load on the "bad" circuit cannot at any time exceed 500 watts, but, because of the resistances placed in series, voltage and lighting drop so drastic that actually, equal seems in fact an extreme overload of 1420 watts. The panel is connected this way so under that it could be used with a portable generator and also so that it could be demonstrated from any convenience outlet without blowing the circuit fuses. Obviously, an actual load of 1420 watts, with any other load on the circuit, would actually kick out a 20-ampere fuse.

The "Bad" Circuit

The audience is told they will be shown what happens when they do not have a sufficient number of circuits and their circuits are overloaded. With the master switch and all outlet switches in the "Bad" direction, the operator places a ¾-amp fuse, which he calls a 15-amp fuse, in the fuse holder and throws the switch. This illuminates the lamp and also lights up the junction light meter. The photoelectric pickup unit, located under the lamp is connected to the pickup by a circuit. The pickup is adjusted under the lamp until a starting reading of 50 foot-candles (more if desired) is obtained. The audience is told how this equipment works and what the foot-candle is. Then the operator calls attention to the starting voltage (for emphasis, we use everyoldy scale voltmeters. While not quite as desirable, ordinary scale voltmeters will do the same job).

The "Jones Family" is used to illustrate what goes on in the home. Mr. Jones has just turned on the floor lamp with a load of 500 watts—but, we haven't shown what the resistance on the No. 14 wire does to the voltage.

Let's flip the switch and see what happens. See, the voltage fell off 7 volts, and we have a drop of 4-foot candles. At the same time an indicator lamp with a jewel reflector shows the position of the lamp.

In the same way Mr. flips on the front porch light, the back porch light, the lamp in the living room, and the kitchen light with little change in voltage and foot-candles, building a theoretical load of 750 watts. At the time Dad Jones comes in, turns on the radio, and settles down to read his evening paper. But, feeling a little chilly, he decides to plug in a portable electric heater (1320 watts).

When the switch is flipped, it throws 500 watts additional load on the fuse (unknown to you) but not through our overhead circuit. This is done by means of a relay. The 15-amp fuse burns. The operator grabs a flashlight and Pa Jones rushes to the basement to "see what is the matter." After pulling the main disconnect, Pa finds that the 15-amp fuse "is no good," so he decides it would be foolish to put in another 15-amp. "So he puts in a 20-amp (actually a ¾-amp fuse) to hold it." At this point the operator warns of the dangers of overloading. He throws the main and the lights come on again.

Daughter Betty then comes in, goes to her room, turns on the light, and in the rushing to a party, plugs in her curling iron (1500 watts). Out goes the

Table I—Demonstration Arrangement for "Bad" Circuit

Switch	Location	Appliance	Watts	Resistance Ohms	Voltage Drop
1	Front living room	Floor lamp	100	60	8
	Front porch	Floodlight	100	[illegible]	[illegible]
[illegible]	Back porch	Floodlight	100	58	[illegible]
6	Side living room	Table lamp	100	58	[illegible]
[illegible]	Kitchen	Ceiling light	100	[illegible]	8
7	Back living room	Radio	100	60	8
[illegible]	Side living room	Portable heater	1,250	11	28
8	Front bedroom	Ceiling light	100	58	16
[illegible]	Front bedroom	Fan	100	[illegible]	[illegible]
10	Front bedroom	Twin floor lamps	100	58	[illegible]
		Total	3,450	[illegible]	140.4
		Wire circuit, 500 feet long		4	
				[illegible]	

These switches were more or less at random, the order of the list being that of their location. The total load, 3,450 watts, is 28.75 amperes.

Table II—Demonstration Arrangement for "Good" Circuit

Switch	Location	Appliance	Watts	Resistance Ohms	Voltage Drop
1	Same	Same	Same	7	1.75
[illegible]	Same	Same	Same	21	10.5
[illegible]	Same	Same	Same	[illegible]	[illegible]
6	Same	Same	Same	14	4
[illegible]	Same	Same	Same	14	[illegible]
[illegible]	Same	Same	Same	7	[illegible]
	Remainder of circuit	Same	750	1	[illegible]
	500 feet garage illuminated	1,000	1,000	[illegible]	[illegible]
		Total	[illegible]	48	
				[illegible]	

20 amperes—[illegible] because of a second relay. And again the problem of Pa finding the trouble. But this time, there is no fuse to replace the burned out one. What to do? The inductive results suggests a reason. The operator is hundred but hardly agrees, not to show what it might do.

The panel is placed behind the fuse and the left switch is turned on, turning on twelve lamps on Bettie's table. A total load of 7450 watts and look at the voltage—down to 105! And the foot candles have dropped to 25. At this point, the audience will call attention to the fact that the panel is on fuse. The fuse effect is secured by running the 500 and 500 watt incandescent through a 2-amp switch box in the top of the panel. This is energized when switch 9 is turned on, and heats while the operator turns on switch 10, and talks about the voltage and lighting drop. The smoke comes from the paper placed in the box.

The ten outlets then location load drop, and the resistance of the wire circuit to lamp drop are given in Table I. (Wire size No. 14, 600 feet long, 500 feet from outlet to 14. Resistance shown is always in conductors only.)

To drop the smoking the operator has only to flip the inverter switch. He then tells for the "Good" circuit. At the point the operator points out the dangers of swinging out of pennies behind fuses. To further emphasize his point, he flips the inverter switch back and forth a few times pointing out the almost visible dimming of the lamp and the reading on the voltmeters and fuses, both meters with no load and full load. The lamp is actually at end of circuit to show maximum drop when load is all on. Resistance calculated on basis of 1.5 ohms.

The "Good" Circuit

The first thing the operator does is to remove the panel from behind the fuse and plug a 12 amp. 3 amps fuse in the holder. Another emphasis that this is the largest that should be used. Then he makes his second installation, one that he does not show the circuit which is 14 Ga. No. 12 wire. If the heater is to be used, he has a special socket for it. Have better use has running in the back part of the house, on an appliance circuit.

Then he proceeds to load the good circuit with the results shown in Table II.

In the good circuit, Switch No. 1 turns on position No. 10 on the board. This was done for the first service switch could be used to avoid confusion, and still not turn on the position where the kitchen heater had been placed on a separate circuit.

After the seven switches have been flipped, the audience can be shown that there are three "spares" for the time use of needed by flipping the three remaining switches to on. But of course, nothing happens. Now the panel is ready to have the inverter switch flipped for the "Bad" circuit.

(Continued on page 34)

A Job to Remember

by Mrs. Homer A. Rowe
H. A. Rowe & Son
Florence, Alabama

Mr. Rowe had gone to a working agreement with a local firm on a diagram concerning his electric water work. The first job was to install the 1½ hp. phase compensator motor for complete rebuild. How did he get it worked in under the job with the service contract. The case from the mill was delivered and in use. The diagram was placed with the check service. We were running up on a slide.

"At 1:00 am the bell in the mill rang. R Rowe. That diagram was ready to give out. Just what that meant, had done. Brown Bomber more that was the size of force, as we had. Does Concentrate and how it was stuck.

We got that job in the shop, performing on a double Dynamo. Can't turn it, shaft off like cure on a tree and. So we got out the block and "let down" and finally got the belt off and the bearings out. Did we do, the power, we were gone.

Then came the shafting. Mr. Diagram had a fine way, did, in which we given Dad "off" So motor, safe, the cost of old no new compressor and not name be pay. Mr. Motor a dose of "me comp" in the old broke, such a good does that so "act crashed" the fully out of they motor belts for hours.

After the gas was back in service, Can't Set Mad compressor room in control, equipment was kept locked.

Exchange Conference

Southeastern utility executives review their industry's problems . . . "Creeping Socialism" cited as single greatest menace facing them

The controversy that free industry, as a result of changes in our economic system, invariably underwent discussion at the opening session of the 17th Annual Conference of the Southeastern Electric Exchange, held at The Greenbrier, in White Sulphur Springs, W. Va., April 12 to 14. From the welcoming address by Glenn D. Johnston, president of the Roanoke Public Warehouse, throughout the three-day conference, there came warnings that creeping socialism was the most perilous menace facing the nation today.

In the President's address, S. C. McMeekin, president of South Carolina Electric and Gas Co., of Columbia, S. C., the progress of southeastern business-managed utilities was reviewed. Highlights of this progress included the installation of 1,500,000 kilowatts of generating capacity since V-J day, representing an increase of approximately 33 per cent. Also cited was the electrification of 382,000 farms in the Southeast since V-J day—a doubling of the number receiving electric service on V-J day.

"What Can One Man Do?" was the subject of Elmer L. Lindseth, president, Edison Electric Institute. A recent survey poll, described by Mr. Lindseth, indicated that 5 out of 5 people recognize the danger of creeping socialism in this country but that less than 1 out of 5 could well have done something in an effort to stop this trend. He then presented a "checklist" — what each man can do to stop this trend toward the welfare state.

S. C. McMeekin, president of the Southeastern Electric Exchange, during the past year.

What the Individual Can Do

1. We've got to get informed—know what we're talking about—be able to express ourselves and what our free enterprise economic system is—to sell it to others.

2. Most reforms of our economic system stem from people brought about by real problems even though the reforms may be ill-conceived.

3. We must be for progress—for change—not merely against something—we must have something positive to offer in improvement in our American economic system.

4. We must spread the story of our economic system in terms that can be understood. We must translate the story into the language of the man in the street in terms of his self interest.

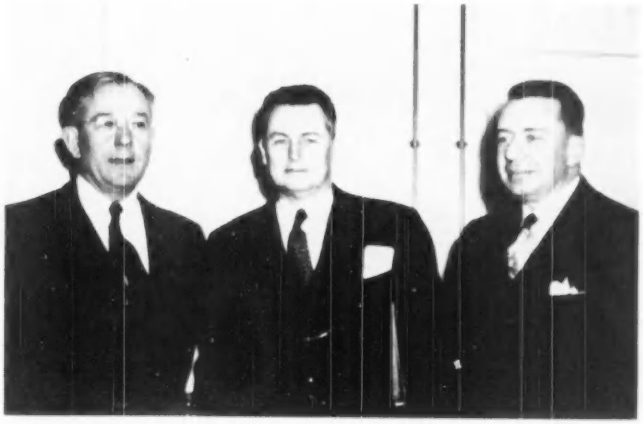
5. We must take a more active interest in government — from the schoolhouse to the White House — and implement it with personal action through letters and calls on our representatives and at times by voting for candidates who favor the American free enterprise type of economic over the welfare state.

6. We must truly deserve the confidence of the people.

Charles E. Wilson, president, General Electric Co., next addressed the Conference. "With the Pursuit of Liberty" was his subject. He pointed out that it is a wholesome change that executives of business and industry gather today to discuss such great abstractions as Democracy and Socialism, but the effort of businessmen to sell the "idea" of the American free enterprise system to the public have been in a way that has been decidedly second-rate up to now. He term[illegible] political action as the most straightforward method of dealing with such [illegible] problems as whether the government shall continue to spend more than it takes in.

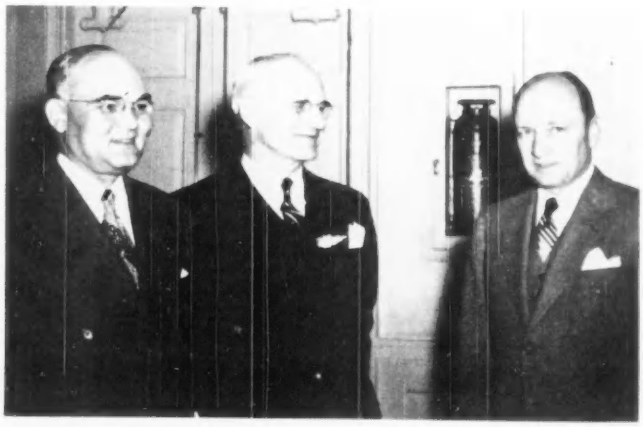
The steps which businessmen can take to stop the inevitable spread of socialistic actions were answered by Mr. Wilson. He asserted that

Allan B. Kline, left, president of the American Farm Bureau Federation, was one of the featured speakers at the annual conference. Right, W. O. Turner, president of the Louisiana Power and Light Co., New Orleans, who was elected president of the Exchange at the closing session.



The program of the conference included addresses by these three, left to right, Tom P. Walker, vice-president, Irving Trust Co., New York City; James H. Jewell, vice-president, Westinghouse Electric Corp., Pittsburgh; and Dr. Benjamin Beckhart, economic consultant, Chase National Bank.

W. O. Turner, president of the Louisiana Power and Light Co., New Orleans, was elected president of the Southeastern Electric Exchange at the final session of its 17th annual conference. Other officers elected are first vice-president, C. B. McManus, president, Georgia Power Co., Atlanta; second vice-president, M. C. Funk, general manager, Appalachian Electric Power Co., Roanoke; and third vice-president, H. C. Leonard, vice-president, Gulf States Utilities Co., Baton Rouge, La.



Left, C. B. McManus, president, Georgia Power Co., Atlanta, who was advanced to first vice-president of the Exchange, and two of the speakers appearing on the program at the last session of the conference: James M. Barry, president, Alabama Power Co., Birmingham; and right, William Naden, director and general manager of manufacturing, Esso Standard Oil Co., New York City.

Load Studies

Off-peak water heater service reviewed as number of units connected increases

by C. W. Haggard,
Manager, Dealer Coordination and Service, Kentucky Utilities Company
and
Harry W. Carloss
Manager, Industrial Engineering and Service, Kentucky Utilities Company

Although this company has operated with an "off-peak" electric water heater service rate for many years changes in conditions in the last few years raised the question as to whether the existing controlled water heating service should be continued. A comprehensive study completed recently including load tests and an analysis of the cost of rendering service indicates that the company is justified in continuing this type of service.

Other companies contemplating this type of service may be interested in the information developed in this special investigation.

In April, 1954, the company put into effect an "Off Peak" electric water heating service rate. This rate was designed to promote full electric use in the home. The customer earns the lowest residential water heating rate when he attaches an electric range of 2,000 watts or more. The rate provides a 10-hour off-peak charging period from 10:00 P.M. to 8:00 A.M. It is applicable where a 60-gallon capacity or larger storage type heater is installed with the bottom element controlled. A separate distinct meter with time clock measures the controlled consumption.

If the consumer installs a two-element heater with a load-limiting thermostat so that only one element can operate at a time, all consumption of the heater during the off-peak hours is billed at the lower rate.

The following are the Company's standard wattage requirements for Groves-Ray heaters:

Normal Tank Size In Gallons	Wattage Rating Of Upper Unit	Wattage Rating Of Lower Unit
30	1000	600
40	1250	750
52	1500	1000
66	2000	1250
80-90	2500	1500

These standards are based on 20 watts per gallon for the bottom unit and 30 watts per gallon for the top unit, using the nearest standard size element.

Load Analysis

In the summer of 1948 the Company made a study of the water heating load to determine its effect on the system peak, the cost to the company to service this load, and the most satisfactory method of rendering this service from both the customer's and company's standpoint. This study was made for three reasons:

(1) Company's increased investment for the additional meters with time control.

(2) Increased cost of maintenance of meters, and other costs incurred in providing this off-peak service.

(3) Because of the tremendous increase in water heater installations.

(4) To determine whether any additional capacity for water heating should be included in the company's current expansion program.

Studies were made of various size water heaters in each of the company's four operating divisions. No specific number of heaters was decided upon for this study, however, it was decided to include enough heaters to establish a trend. Consideration was given to customers with various kilowatt-hour consumptions.

The study included an analysis of the cost of rendering the service using plate data and wattages of the heaters and hours of operation of each heater. A long enough study was made on each heater to allow for the adjustment of hot water usage from an off-peak heating period to a 24-hour heating period.

A clock wound recording ammeter was installed on each water heater to indicate voltage when the element came on, thus recording the time and number of hours each heater operated each day. The time control of each heater was eliminated during the test period. The information obtained from these recordings was tabulated and plotted by divisions and the total for all heaters checked. After making studies of 64 water heaters it was decided that the trend had been established so far as effect on off-peak was concerned.

An analysis of the equipment costs and annual operating expense was made for the separate meter with time switch as used with our present controlled water heating service.

The tabulation and curve plotted for the 64 water heaters revealed the following:

(a) Total KW of the 2nd element 91.0
(b) Average KW of the lower elements 34.0
(c) Demand factor of heaters 37.2%
(d) Average hours used per day per heater 3.1
(e) Percent of connected load consumed between 10:00 and 8:00 P.M. 57%

The study showed that no top elements came on the line with the bottom elements uncontrolled.

Based on these findings it would require an investment of $239.44 in the company for generation and transmission for each water heating customer served with 24-hour income billed service. The lighter load hit the effect on the capacity required for the company's distribution system when the diversity between the heaters and other loads was considered.

The cost matrix for controlled off-peak water heater service determined as follows:

Investment

(a) Per 240 volt 2 wire meter with time switch	$24.00
(b) Service Per Income (Incl. meter)	17
(c) Average installation cost	14
(d) Total separate meter and control investment	$41.00

Annual Operating Expense

(a) Meter reading, checking and billing, etc.	[illegible]
(b) Billing forms and mailing	41
(c) Operating and maintenance of metered wiring	[illegible]
(d) Depreciation (all modes)	[illegible]
(e) Taxes applicable	17
(f) General administrative expense	24
(g) Credit [illegible]	[illegible]
(h) Total	[illegible]

The average annual off-peak consumption per heater is 2,275 KWH.

(Continued on page 38)

This *used to be* the coldest room in the house

The cleanest, fastest and most economical way to end the heating problem of that one cold room in the house is to install the FA Electric Quikheter. From then on it's a simple matter of flipping a switch to get *roomwide comfort* in a hurry.

This thrifty wall heater provides an instant flood of warm air just when you need it most . . . in rumpus rooms, bathrooms, nurseries and other hard-to-heat rooms.

The FA Quikheter is quick and easy to install . . . and quick to please and impress homeowners. So write for Bulletin 1102 and read for yourself how really simple and inexpensive it is to install and operate the . . .

ELECTRIC FA QUIKHETER

"Saves on everything but comfort"

The operating switch is now built into the FA QUIKHETER

Frank Adam Electric Co.

ST. LOUIS 13, MISSOURI

Makers of BUSDUCT • PANELBOARDS • SWITCHBOARDS • SERVICE EQUIPMENT • SAFETY SWITCHES • LOAD CENTERS • QUIKHETER

Industrial Lighting Gets Tangible Results

The improvement of lighting conditions in an industrial plant results in increased production which can effect a return of several hundred per cent per year on the additional investment, according to Carl E. Egeler, illuminating engineer at General Electric's Lamp Department.

Speaking before members of the American Society of Mechanical Engineers and the Society for the Advancement of Management at their first annual Plant Maintenance Show in Cleveland, Ohio, Mr. Egeler said "Skilled workers' production invariably improves when adequate illumination of good quality is provided.

One company reported a 25 per cent increase in punch press production when special local or general lighting was installed, he said. To illustrate his point further, Mr. Egeler pointed out that a textile mill increased production 9 per cent and reduced mending cost 33 per cent, and that a machine tool manufacturer reported a 15 per cent production increase in the first department lighted as part of a relighting and finishing program.

A good lighting system should provide an adequate amount of light for the seeing task being performed, a minimum of direct and reflected glare, and for most comfortable seeing, backround brightness comparable to those of the task and its immediate surroundings, Egeler said.

The amount of light provided at the work area should be determined by analysis of the seeing tasks involved, according to the illuminating engineer. He said maximum foot candles desired might range from 1 foot candles for "rough seeing tasks" or hallways and corridors, to 100 or more foot candles for the finest precision work.

The color of light to be used for industrial operations also merits close attention, Egeler said, the color of light emitted by the "standard cool white" fluorescent lamps finds the widest application. Under these lamps the appearance of most colored materials is excellent, he said. When color discrimination is an important part of the seeing task, however, the warm white fluorescent lamps have the edge, Egeler added, over the cool white.

Color conditioning of industrial interiors is fast being recognized not as a matter of decorative, but rather as an element in the production process, Egeler declared. A stocktaking of approved painting color combinations, in said General Electric's own first choice, is a blue-green to provide cheerful and colorful backgrounds. Another preference is light buff, sometimes with a brownish tint. The lines are graded downward from the white ceiling, so that the brightness of the surfaces also step-down.

"Color and good lighting are partners in producing seeing conditions which stimulate high industrial production," Egeler declared, "and as such are an accepted feature of plant design and operation." He saw the combination as having an important bearing on employees' health and morale, on simplifying the maintenance problem, on accident reduction, and on improvement in the quality as well as quantity of production.

Electrical Blanket Devised for Piping

Faced with new problems encountered in a novel type of steam electric generating plant, engineers of Ebasco Services, Inc., have moved up with an insulating process which, it is believed, will guarantee continuous flow of water to the Lumberton, N. C., plant of the Carolina Power & Light Company, even in freezing weather.

The problem arose because the new 120,000 kw. capacity plant at Lumberton is of semi-outdoor construction and consequently many of the pipes then do not have the protection of the housing of conventional plants.

Engineers first installed standard tar-felt pipe insulation. Around this they placed a layer of aluminum foil, secured in place by special tape. Next was installed electrical resistance cables, either parallel-lay or wound around the insulated pipe. Next a second layer of aluminum foil was placed over the heating cable. Principal function of the foil is to distribute the heat generated by the resistance wires. Some 14,000 sq. ft. of foil was used.

Discussed here in aluminum foil was then covered by layers of 1 inch selected wool.

Over all has been placed a final weather-proofing of corrugated aluminum sheets, which, it is believed, will last longer than the 20 year aluminum jacket that early proved to be "not strong enough." But for the purpose of keeping water in pipes in freezing weather, it appears the new system will not need the frequent maintenance attention.

So, when and if a severe cold snap hits Lumberton, and the authorities in charge of the plant feel it necessary to keep the water liquid, all the engineers have to do is shoot a little juice through the special electric blanket.

Official Code Interpretations

Interpretation No. 347
Issued December 23, 1949

Section 5021 — Flexible Conduit, Class I, Divisions 1 and 2.

Statement: A motor-operated appliance requires a flexible connection between the motor and its controller mounted on a common base. The appliance is intended for use in Class I, Group D hazardous locations, the motor and starter being of explosion-proof type.

Question: May a flexible connection employing a Type S or Type SO flexible cord enclosed in standard flexible conduit with special fittings at the cord terminals and special bushings at the conduit terminals constituting an assembly designed to meet the intent of section 5021, be used under the foregoing conditions?

Answer: No. Section 5021 applies strictly to portable devices such as portable lamps or appliances where the use of explosion-proof flexible conduit is not practicable.

Interpretation No. 350
Issued March 6, 1950

Section 2571c — 2598 — Service Grounding Conductors.

Statement: A cord conduit enclosing branch circuit conductors passes from the service equipment to a point near the grounding electrode.

Question 1: Is it the intent of section 2598 of the 1947 National Electrical Code to permit the service grounding conductor to run through cord conduit and use in more or less lieu, enclosing branch circuit conductors, to a point near the electrode grounding electrode, where such a way is applied to an overhead distribution system?

Answer: Yes.

Question 2: Is it the intent of section 2571c that all signal conductors enclosing the system grounding conductor be insulated?

Answer: No, the paragraph applies to the conduit itself, not to grounding conductors as specified in section 2571.

New Building For Georgia Power

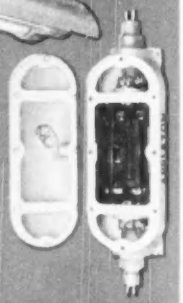
Negotiations for a new office building to house the Georgia Power and Light Company at Valdosta, was announced by the Spencer Construction

PERMANENT DISASTER PREVENTION!

New Vented Type EVX Explosion-Proof Fixture. This fixture provides safe superior illumination for hazardous locations. 10% greater light, 50% lighter in weight—cooler operating!

Safety and Service features of the Appleton Type EFU Explosion-Proof Fluorescent Lighting Fixtures make them foremost in design of fluorescent lighting for hazardous locations.

The Appleton Seal-Line Switch Unilet is a combination switch housing and sealing unit. Provides complete explosion-proof performance without the need of additional sealing fittings.



View of Appleton Seal-Line Switch Unilet with cover removed, showing switch chamber isolated from splicing chambers in approved explosion-proof method.

Type FSQX Explosion-Proof and Dust-Tight Receptacle with interlocking safety switch and type FP plug.

Appleton Explosion-Proof Reelites automatically take up and pay out conductor cable to machinery used in hazardous locations.

UL

APPLETON

EXPLOSION-PROOF EQUIPMENT

For Hazardous Locations

Dangers to life and property that lurk in the wiring systems of hazardous locations are permanently eliminated when Appleton Explosion-Proof Equipment is used.

These rugged malleable iron conduit fittings and lighting fixtures confine treacherous arcs that cause fires and explosions in chemical plants, oil refineries, hospital surgeries—all locations where explosive or flamable vapors, dusts or gases are present.

Appleton Explosion-Proof Fittings are strong and unbreakable, roomy, truly threaded and machined, easy to install. And there is an Appleton Explosion-Proof Fitting exactly suited to every explosion-proof requirement.

Any wiring job—explosion-proof or otherwise—is a better wiring job when Appleton Electrical Fittings are used. So save time and build better. Order all your wiring requirements from one dependable source—the 15,000-Item Appleton Line. Write for catalog information.

SOLD THROUGH ELECTRICAL WHOLESALERS

APPLETON ELECTRIC COMPANY

1754 WELLINGTON AVENUE • CHICAGO 13, ILLINOIS

Branch Offices: NEW YORK • DETROIT • CLEVELAND • SAN FRANCISCO • ST. LOUIS • LOS ANGELES • ATLANTA • BIRMINGHAM • MINNEAPOLIS • PITTSBURGH • BALTIMORE • BOSTON • DENVER • PHILADELPHIA • CINCINNATI • HOUSTON • HAVANA

Factory Representatives: Dallas, Indianapolis, Kansas City, Omaha, Milwaukee, New Orleans, Seattle • Export Representatives: International Standard Electric Corp., 67 Broad St., New York, N. Y.

APPLETON ELECTRIC PRODUCTS

APPLETON

CONDUIT FITTINGS • LIGHTING EQUIPMENT • OUTLET AND SWITCH BOXES • EXPLOSION-PROOF FITTINGS • REELITES

Company of Tifton. The cost of the modernistic, one-story building, to be located on the northeast corner of Patterson and Gordon Sts., will be $103,950.

J. W. Lastinger, Georgia Power and Light Company vice-president and Valdosta division manager, stated in the announcement of the awarding of the contract that the rapid growth of the firm's system and the added administrative and operational functions brought about by this growth have made larger and more modern quarters a necessity.

"During the past five years," he explained, "the total number of customers served by the company in the Georgia territory has jumped from 16,129 in October, 1944, to 26,129, in January, 1950—an increase of over 50 per cent."

The new building will house the Valdosta division offices as well as headquarters for the administration and operation of the entire Georgia Power and Light Company.

Two features of the building have been designed solely for customer convenience. A "drive-in" cashier's window on the Gordon Street side of the building will enable motorists to drive alongside of the building and pay bills without leaving their cars.

BACK TO SCHOOL—Thirty-eight members of the residential sales department of the Florida Power Corporation get a first hand view of the newest addition to General Electric's gallery of lamps while attending a five day course in Home Lighting Fundamentals at Nela Park recently. In the photograph above, Horace Schiller, Lighting Institute staff member, presents G-E's newest incandescent bulb, the 50GA, which is an attractive combination light source and fixture in one convenient unit.

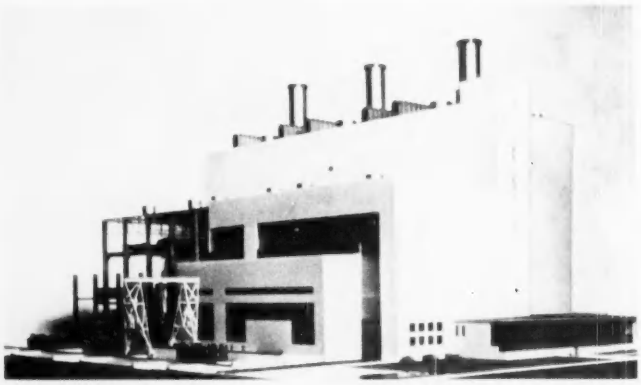
AIEE Chapter Officers Elected

NEW CHAIRMAN of the North Carolina Chapter of the American Institute of Electrical Engineers is Fred C. DeWeese, of Raleigh. Mr. DeWeese was elected at the chapter's spring meeting held at Winston-Salem.

Other officers elected for 1950 are secretary-treasurer, Nels H. Erlandson, Raleigh; members of the executive committee, Dr. G. B. Handley, of North Carolina State College, Raleigh; E. K. Kerrhill, of Duke University, Durham, and G. G. Mattison and M. M. York, both of Charlotte.

Retiring officers were: G. G. Mattison, Charlotte, chairman, and Ben A. Martin, Charlotte, secretary-treasurer.

Speakers at the spring meeting included: Dr. R. K. Honaman, director of publication of the Bell Telephone Laboratories of New York, who spoke on "Frontiers of Telephony"; James E. Lindman, president of the American Institute of Electrical Engineers, who discussed the work of the national organization; C. Lyon of East Pittsburgh, Pa., engineering manager of the Westinghouse Electric Corporation; Carl Scott Jennings, a student at N. C. State College, Raleigh, and Prof. Walter J. Seeley, vice-president of the Southern District of AIEE, and head of the Electrical Engineering Department at Duke University, Durham.



TWENTY-MILLION-DOLLAR PLANT—Officials of Florida Power Corporation have announced recently that work was starting immediately on the new $7,500,000 power plant to be built at Booth Point near Oldsmar in Pinellas County. This first 40,000-kilowatt unit is one of three such units that will be built at this location within the next five years. Ultimate cost of the plant, when completed, will be $20,000,000.

NAMES IN THE NEWS

Appointment of **A. S. Basil** as assistant general sales manager to direct the national sales of Kaiser Aluminum electrical wire and cable products has been announced by **Bert Inch**, general sales manager of **Kaiser Aluminum & Chemical Sales, Inc.**

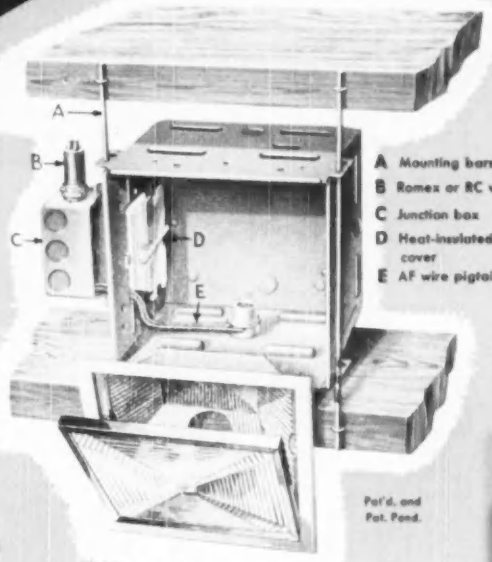
Headquarters for the sale of the company's electrical conductor products is being established at the cable, rod, bar, and wire plant of the Kaiser Aluminum & Chemical Corporation at Newark, Ohio. At the same time **W. H. Biskeborn**, who has been a member of the production department, is transferred to electrical cable sales as technical director.

KIRLIN

BETTER RECESSED LIGHTING

New!

INSTALLATION METHOD



A Mounting bars
B Romex or RC wire
C Junction box
D Heat-insulated cover
E AF wire pigtails

Pat'd. and Pat. Pend.

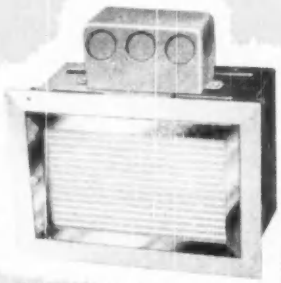
Saves $2.00 or more on installation cost

NO ASBESTOS WIRE NEEDED

Rubber-covered wire runs direct to fixture

NO CARPENTER WORK

Applies to all KIRLIN incandescent models. All parts required for installation furnished with fixtures—AF pigtails; wire-nuts; junction box; heat insulated cover; support bars and staples; tape; everything needed to the R.C. building wire.



KIRLIN Rectangular Models —40 to 150 Watt sizes.

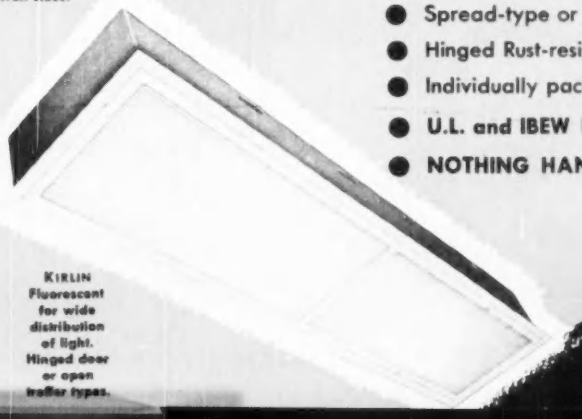
KIRLIN

Recessed Fixtures

are made in all sizes—
square or rectangular—
and in fluorescent

KIRLIN Square Models 100 to 500 Watt sizes.

- Alzak GlasSurfaced Aluminum Reflectors
- Spread-type or Concentrating Lens
- Hinged Rust-resisting Doors in Diecast Frames
- Individually packed for shipping
- U.L. and IBEW LABELS
- NOTHING HANGING FROM CEILING



KIRLIN Fluorescent for wide distribution of light. Hinged door or open troffer types.

In stock at leading wholesalers everywhere.

The KIRLIN CO.
3435 E. Jefferson Avenue
Detroit 7, Michigan

Mr. Baird has had more than 25 years of experience in the wire and electrical industry with the United States Rubber Company, including service as general sales manager of its wire and cable department directing sales of electrical wire and cable, battery separators, and electric radiant heating panels.

•

Pyramid Instrument Company, of New York City, have announced the appointment of five additional sales representatives for territories in New England, the Southeast, Middle West, Southwest, and Southern California. This is part of the company's plan of expanding sales, which was started in the latter half of 1949.

The new sales representative in the Southeast is **Woodman, Ravfield and Potter Company**, 1570 Northside Drive, NW., Atlanta, Ga. Their territory includes North Carolina, South Carolina, Tennessee, Alabama, and Georgia. Representatives are **B. S. Woodman, Robert E. Allen, Robert C. Barrett, Walter L. Self**, and **Carl W. Strong**.

Glidden Engineering and Equipment Company, 5802 Winchester St., Houston, Texas, will represent Pyramid in the Southwest. Their territory includes Texas and parts of Oklahoma and New Mexico. Representatives are **J. M. Robertson**, 6234 Peeler St., Dallas; **J. F. Hodges**, 34 Madison St., Tulsa; and **D. L. Glidden**, at the company's headquarters in Houston.

•

W. F. Strong has recently been transferred to **General Electric's** Dallas Office as an application engineer for the Southwestern District.

A graduate of Tulsa University and Oklahoma University, Mr. Strong started working for General Electric in 1940 as a student engineer on the test course in Schenectady. After graduating from the test course, he spent the next four years on magnetic and electronic control design. Until his recent transfer, he has worked as an industrial application engineer on industrial power distribution, welding, machining and electrostatic precipitation.

•

The Ohio Brass Company, Mansfield, Ohio, announces the appointment of **William B. Owens** as district manager of the territory in the Southeast formerly covered by the late **George Willis**. His headquarters temporarily are to be in Atlanta.

A broad knowledge of the electric power and transit industries prepares Mr. Owens with an excellent back-

William B. Owens

ground for handling his new duties. Before joining the O-B organization, he was associated with the Georgia Power Company and earlier worked with the Link Belt Company.

A native of Augusta, Ga., Mr. Owens received a degree in mechanical engineering from the Georgia School of Technology. During World War II he served with an Ordnance unit in Italy and now holds the rank of major in the Ordnance Reserve.

•

The firm of **Duizend & Levin**, manufacturers representatives serving the Middle South and exporters for the Americas, have announced the changing of their name to **Duizend, Lain, and Levin**.

H. E. "Buster" Lain, who has covered Texas, Louisiana, Oklahoma, Arkansas and Memphis Texas, as a manufacturers representative for electrical agency handling single lines in the Southwest, will now be associated with the company as a partner.

The firm will now operate three offices, with the main office and showroom located in New Orleans, La., at 414 International Trade Mart, with **Al Levin** in charge. Mr. Levin was formerly vice president and sales manager of a New Orleans wholesale firm.

H. E. Lain

The Dallas, Texas, office is located at 6134 Overlook Drive, and will be operated by Mr. Lain. The office will cover the northern part of their territory. The Houston, Texas, general

Al Levin

southern located at Commerce, Sixth Floor, & Caroline Sts., will be headed by **Robert Judy**.

In addition, the company has two salesmen operating from the New Orleans office, **S. L. Blackburn** and **J. Greenberg**.

•

Leon A. Brown, president of **Raybin Electric Supplies, Inc.**, Tampa, Jacksonville, Miami, and St. Petersburg, Fla., has announced the appointment of **J. A. (Jimmie) Mook, Jr.**, as advertising and sales promotion manager. The appointment became effective March 1, 1950.

J. A. Mook, Jr.

Mr. Mook will assume complete responsibility for all sales promotion and advertising for all Raybin branches. He is well qualified for this position, and has more than 10 years experience in merchandising, advertising, and the promotion of the wholesale electrical supply business in Florida, having been previously connected with Raybin Electric Supplies, Inc., for a number of years.

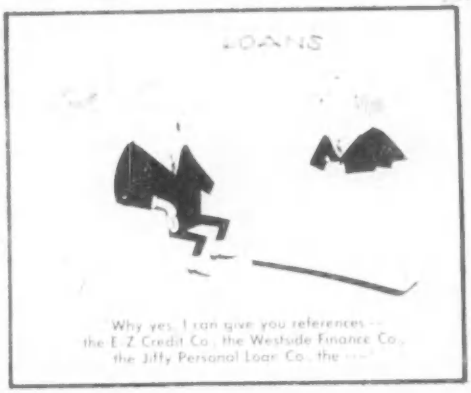
Your Work Can Wait!

"Just one more button to tighten Joe, and I'll shut off th' light"

"Bacon again! Why can't you be like other husbands, and bring home a pay envelope?"

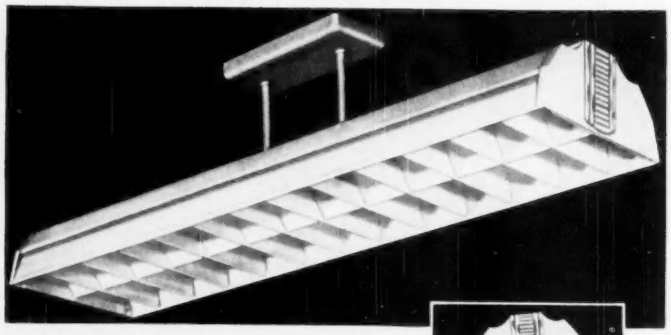
"It smacks of economy — giving me 300 stamps to lick, then asking me to lunch!"

Of course, Sam's low prices are due to the fact that he's outta the high rent district



"Why yes, I can give you references — the E-Z Credit Co., the Westside Finance Co., the Jiffy Personal Loan Co., the ---"

WHO'S GIVING WHO THE BUSINESS or . . Are you getting your share of school and institutional lighting dollars?



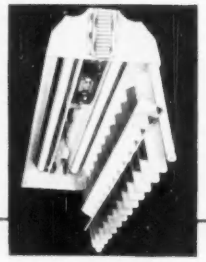
COMPCO'S DUAL-DIRECTION LUMINAIRE HELPS YOU GET THE BUSINESS

GLARELESS HIGH-POWERED LIGHT IS ESSENTIAL in school rooms, hospitals and institutions. COMPCO'S 60/40 luminaire produces scientifically controlled reflected and diffused illumination with a maximum of efficiency. Illuminated metal sides . . . no dark spots . . . no glass or plastic to crack, discolor, peel or chip.

IT'S A FIXTURE EASY TO MAINTAIN, easy to install, and so completely versatile. Equally adaptable to flush or suspension mounting, singly, or in continuous rows. Louvers swing open from either side for ready access to components and for quick relamping, or can be completely removed without tools.

Also available in 48" SLIMLINE (Model 644) and 96" SLIMLINE (Model 648)

48" long, 12½" wide, 5½" deep. Has beautiful ornamental ends of satin finished chrome which can be easily removed for continuous row mounting.



EXTRA COMPCO QUALITY AT NO EXTRA COST

You can't see it here, but once you lay your eyes on a COMPCO fixture you'll see what we mean by *extra* COMPCO QUALITY. It's there in the attention to fabricating details, in the hardware, in the wiring, in the nationally known and recognized components. Yes, important too, is the integrity of a company that backs up its products with a rock-bound guarantee of performance. And, you'll buy COMPCO products at competitive prices.
Write for our catalog and see.

COMPCO CORPORATION

For the finest in fluorescent fixtures

2251 ST. PAUL AVE., CHICAGO 47

Compco

Visit us in Conference Booth 214 N.A.E.D. Convention

NEW PRODUCT NEWS

Floor Box

A NEW FLOOR BOX has been developed by the Frank Adam Electric Co., 3650 Windsor Place, St. Louis 15, Mo., that, it is claimed, will adapt itself to any floor box requirement.

This new Universal Floor Box, which features an adjustable, leveling top, is designed for installation in either a one-stage or two-stage floor construction and provides a smooth floor surface in either case. By permitting a variable adjustment of the finishing cover of from 1-8-inch to 1-4-inch, this new floor box can be adapted to meet the varying thicknesses of linoleum covered floors or of finished floors of cement, terrazzo, tile, or wood floors on sleepers.

Box diameter is 4 inches by 2 3/8 inches with four flattened sides for knockouts, plus a 1/2-inch knockout in the bottom. The box was designed as a floor outlet for lighting, telephones, signal systems and small electrical appliances.

•

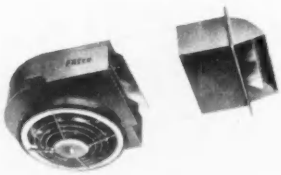
Kitchen Ventilator

A NEW TEN-INCH ventilator, designed primarily for kitchen use, at reactively priced for a volume market, has been developed by Fasco Industries, Inc., Rochester, N. Y.

This ceiling-mounted or inside wall-mounted ventilator supplements the Fasco line of outside wall ventilators. The ventilator can be installed for either single or three-speed operation. Using less current than a 50-watt bulb, the fan completely changes the air of the average kitchen in three minutes.

An outside wall hood, made from rust proof aluminum, is fitted with a water-tight louvre door. An overhanging hood prevents entrance of rain, snow, cold, insects, and birds.

In addition to its obvious use in modern kitchens, this new Fasco ventilator is suitable for installation in ceilings or inside walls of bath



announcing:

the new SILVALINE

Service Entrance Cable—

Type SE With True URC

WEATHERPROOF Protection

Now, *Anaconda* gives you a completely new Service Entrance Cable that provides greater dependability, longer life, higher resistance to weather, with these 4 features . . .

1. **TRUE URC SATURANT** and Finish provide durable fibrous covering with excellent weathering properties.

2. **TOUGH NEOPRENE TAPES** cover each individual conductor — increase resistance to heat and weather . . . in 2 colors, black and red—give the preferred means of colored conductor identification.

3. **GLASS AND COTTON** combination over-all braid covering provides high resistance to deterioration and adds to life of covering.

4. **SILVER-FINISH COATING** provides for clean handling and an attractive surface . . . makes a greatly improved base for house paint—permits use of URC Saturant and Finish without discoloring externally applied paints.

A-1247

To complete your information on the new Silvaline* URC-Type SE Weatherproof Service Entrance Cable, contact your nearest Anaconda Sales Office or Distributor.

Anaconda Wire & Cable Company,
25 Broadway, New York 4, New York.

*Trademark

The right cable for the job

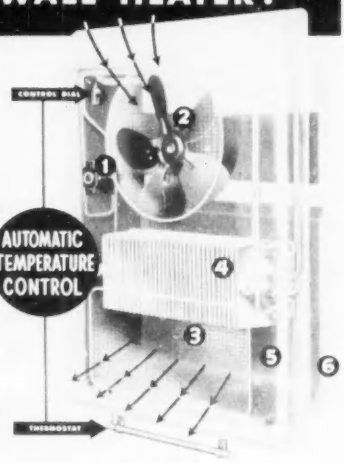
ANACONDA®

WIRE AND CABLE

NEW AUTOMATIC, ALL-ELECTRIC
ELECTROMODE
DOWN-FLO WALL HEATER!

World's Safest Heater with Lifetime Heating Element

1. 100% AUTOMATIC CUT-OFF
2. QUIET, LONG-LIFE MOTOR
3. EXCLUSIVE DOWN-FLO HEATING
4. EXCLUSIVE LIFETIME HEATING
5. ATTRACTIVE SILVER-GREY FINISH
6. AS EASY TO INSTALL



There's Nothing Like ELECTROMODE HEAT!

AUTOMATIC DOWN-FLO WALL MODELS

AUTOMATIC WALL TYPE BATHROOM HEATER

Electromode makes a full line of all-electric fan circulating heaters for every purpose, business and home. Electromode Heaters are nationally advertised and sold through leading electric wholesalers.

ELECTROMODE All-Electric HEATERS

FREE CATALOGS!

ELECTROMODE CORPORATION DEPT. ES-50
45 Crouch St., Rochester 3, N. Y.

Please send Catalogs and Dealers' Name where I can buy with no obligation whatever.

NAME _____
TITLE _____
ADDRESS _____
YOUR WHOLESALER _____

rooms, laundries, or recreation rooms to remove unwanted heat, steam, smoke, fumes, and odors.

A written request will bring prompt and complete information from Essco.

•

Knockout Plugs

NEW KNOCKOUT plugs, manufactured by Buchanan Electrical Products Corp., 12900 Central Ave., Hillside, N. J., use of positive compression design and provide simple and effective means for accomplishing permanent closing of unused knockout holes in electrical devices or outlet boxes.

The new plugs, which are fabricated from heavy gauge stamped steel

are of rugged construction and finished cadmium plated for most economical. Design of these plugs is to provide a zinc engagement which prevents loosening or accidental removal from knockout holes.

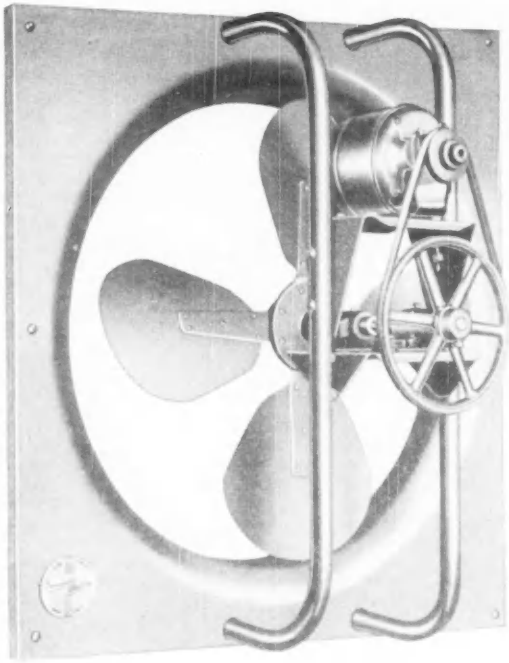
The devices are available in sizes to fit all five standard knockouts, namely, ⅞-inch, 1-inch, 1⅜-inch, and 1⅝-inch. They are also readily adaptable to other electrical and mechanical uses where an effective temporary permanent plugging of fractional size holes may be required.

•

Fluorescent Starters

THE NEW Sylvania DC-7 glowtube fluorescent starters manufactured by the Industrial Sales Dept., 70 Pine St., New York 15, N. Y., have been designed to overcome the disadvantages inherent in glow switch type starters.

All operations are performed by metallic, rugged and unbreakable mechanism. Proper noninterruptible life period eliminates stress, the tube gives cycle resulting in longer lamp life. The new starter will start fluorescent lamps over a wide voltage and temperature range, automatically and rapidly blink during a defective lamp and automatically cut out and stay off when the power circuit is removed.



Peerless-Electric

TYPE PAT VENTILATTIC FANS

Attic type ventilating fans for night cooling of homes, stores, clubs, etc., are essential to summertime comfort. Peerless Electric Type PAT Ventilattic Fans, operating silently and efficiently and economically, exhaust summer daytime warm air and pull in cool, fresh air to every room in the house, for comfort in the evening and throughout the night.

FEATURES

MOTORS — Resilient mounted and sleeve bearing for quiet operation, automatic thermal overload protected, selected for their long hour duty. Designed by "Peerless Electric," a manufacturer of fans and motors since 1895.

QUIET OPERATION — Belt driven at slow speed, the perfectly balanced heavy-gauge steel blades operate silently and with high efficiencies. Operation costs only a few cents a day.

FAN BEARINGS — Sturdy wool-packed sleeve bearings are rubber mounted. Large oil reservoirs reduce oiling requirement to once a season.

GENERAL CONSTRUCTION — Panel, arms and bearing support assembly completely welded together, heavy adjustable motor support to adjust belt tension, motor pulley variable pitch for changing fan speed, panel with deep venturi for efficient quiet operation — assembly finished in attractive gray Hammerloid baked enamel.

SIZE RECOMMENDATION — Select a Ventilattic fan that will change the air in the house, or space to be ventilated, at least once every minute for Southern climate and once each minute and a half in Northern climates to assure maximum cooling effect.

RATINGS — In accordance with Propeller Fan Manufacturers Association and American Society of Heating & Ventilating Engineers.

GUARANTEE — Peerless Electric Fans and Motors are guaranteed against defective workmanship or material for a period of one year from date of shipment from factory. All units when shipped are registered and the serial number identifies it immediately for spare parts or duplicates.

Certified Ratings

FAN PERFORMANCE AND DIMENSIONS

Model	Fan Dia.	Capacity C.F.M.	Capacity C.F.M. 0.1" S.P.	Motor H.P.	High R.P.M. Fan	A	B	C	D	E	F	Shpg. Wgt.
PAT24	24	4,600	2740	¼	585	34	31¾	15½	24¾	[illegible]	3½	90
PAT30	30	5,450	3280	¼	520	40	37⅛	14¾	30[illegible]	[illegible]	[illegible]	120
PAT36	36	8,250	5000	¼	400	46	43⅝	17¾	36[illegible]	[illegible]	4	152
PAT36A	36	9,000	5300	½	435	46	43⅝	17¾	36[illegible]	[illegible]	4	165
PAT42	42	11,000	6770	½	365	52	49⅝	17¾	43	[illegible]	4[illegible]	198
PAT42A	42	13,100	8060	½	435	52	49⅝	17¾	43	[illegible]	4[illegible]	215
PAT48	48	14,500	9000	½	375	58	55¾	18⅝	49	[illegible]	4⅝	250
PAT48A	48	16,250	10500	¾	420	58	55⅝	18⅝	49	[illegible]	4⅝	265

Certified Dimension Prints Furnished on Request

THE Peerless-Electric COMPANY • WARREN, OHIO

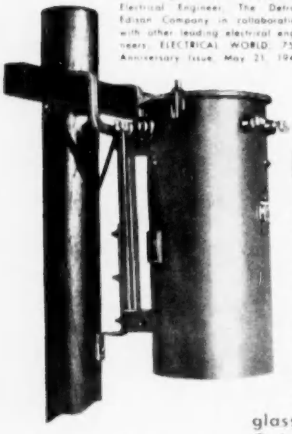
NOW! the transformer of the future

FUTURE POSSIBILITIES

. . . It is to be expected that such activity (improvements) will continue in the future. Much of it can probably not be foreseen at this time. There are a few items, however, which might be mentioned as either distinct possibilities or highly desirable.

There is considerable promise of the production of a dry-type distribution transformer for pole top installation. The advantage will be less weight and lower maintenance. It seems possible that on such a transformer the case might be reduced to a minimum or perhaps be eliminated entirely.

Excerpt from: "Distribution Transformer" by Howard P. Seelye, Chief Electrical Engineer, The Detroit Edison Company, in collaboration with other leading electrical engineers. ELECTRICAL WORLD, 75th Anniversary Issue, May 21, 1949.



Currently available in sizes to 100 KVA, voltages to 5000 V.

MARCUS

DRY TYPE AIR COOLED DISTRIBUTION TRANSFORMERS

Months before the publication of this excellent article on distribution transformers, Marcus, a pioneer in the field, announced a new line of *all purpose* dry type distribution transformers for indoor or outdoor service.

The complete absence of hazardous oil or toxic liquid affords safety never before realized. Superior Class B and C heatproof insulation, such as fibreglass, mica, porcelain, new Johns-Manville Quinterra, etc., results in overload capacities unobtainable with Class A oil filled units. The entire transformer element is seal protected against oil, acids, moisture, etc., and is housed in a sturdy, scientifically ventilated, weather proof case which conforms with all applicable EEI-NEMA construction standards. This extremely versatile transformer can be used outdoors, pole or platform mounted or indoors at the load center, mounted wherever convenient with no expensive fireproof vault required.

AIR COOLED TRANSFORMERS EXCLUSIVELY
1 to 2,000 KVA up to 15,000 Volts to meet Individual Requirements
- DISTRIBUTION
- GENERAL PURPOSE
- UNIT SUBSTATION
- PHASE CHANGING
- ELECTRIC FURNACE
- RECTIFIER
- WELDING
- MOTOR STARTING

Write for Bulletin #49-ACO

COMPETITIVE PRICES — GOOD DELIVERIES

NEMA

Sales Representatives:
W. E. HOLIMAN COMPANY
Houston 1, Texas
L. MORRIS LANDERS COMPANY
Atlanta 3, Georgia

MARCUS TRANSFORMER CO.
INC.
38 MONTGOMERY STREET
HILLSIDE 5, NEW JERSEY

PIONEERS IN THE FIELD OF AIR-COOLED TRANSFORMERS

Rural Transformers

CSP rural distribution transformers for operation on 25 kv multi-grounded systems are available from Westinghouse Electric Corp., P. O. Box 2099, Pittsburgh 30, Pa.

The new transformers make possible economical service to sparsely settled rural areas or increase in capacity in existing heavily loaded rural systems. All protective features of the present CSP transformers are included in the new design. Electrical characteristics are based on extrapolation from existing distribution transformer performance specifications.

The new transformers are of simple shell construction with two type "C" core loops of high permeability. Hipersil. Coil grouping is low-high-low to give low impedance. Basic insulation level is 125 kv. full wave. All high voltage taps are brought to a porcelain base tap changer. Cases are of rounded tank construction with dimpled seamed bottom and rolled top. Two sets of hanger lugs are provided for two-position mounting on pole or crossarm. The single high voltage bushing is secured mechanically on the underside of the cover, eliminating external steel flanges. Transformers are equipped with the latest type Delron arresters.

The new distribution transformers are rated from 5 through 50 kva. single-phase, 60 cycles, 24,940 Grd. Y, 14,400 to 120/240 volts with full capacity taps at 13,800, 13,200, and 12,670 volts and a reduced capacity tap at 12,540 volts.

•

Lightning Arrester

A vertical version of the "Autogap" Lightning Arrester has been brought out by Hubbard and Company, 6301 Butler St., Pittsburgh 1, Pa.

The company states that the new vertical design has all the essential features of the older horizontal "Autogap" which it does not replace.

THE POPULAR NEW STREET LIGHTING BRACKET

HUBBARD ROUND BRACE TYPE

HOT GALVANIZED

The quick popularity attained by the new Hubbard Round Brace Street Lighting Brackets is easily understood. They have a smooth upsweeping curve that combines appealing grace with practical features of high lift and easy wiring.

Mounting space on the pole, between mounting bolt and lag screws, is only 8½-inches, and the actual gross measurement from top to bottom of attachment is less than one foot. This extreme economy of space becomes a most desirable feature where small space is available, or where it is necessary to mount the bracket at the top of the pole to gain luminaire elevation. Attachment plates, ¾-inch round brace, and pipe are welded into one integral unit of great rigidity and strength.

The bracket may be mounted on steel poles . . . simply specify pole diameter, bands and bolts for this purpose. It is furnished with threaded end for Levelite attachment or plain end for slip-fitter luminaires.

The exclusive Hubbard "Keyhole" type of attachment permits installation by one man. Insert the Machine Bolt in the pole and turn nut down so that the head of the bolt is left projecting about an inch from the pole. Simply "hang" the Bracket over the head of the bolt. Then draw nut tight and install the lags in the bottom plate.

For small pole attachment, there is no change in the design of the pole. Brackets are used exactly the same as for the large diameter pole, and utilizing two angle bolts to attach to the bottom fastening. For small diameter pole mounting, the "lock" on the lower attachment is drawn in by tightening the nuts until the best fit is obtained.

Stock No.	End	Nominal Length, Feet	Nominal Pipe Size, Inches	Rise—From Top of Lower Attachment Plate to Center of Pipe at Outer End Approx. Inches	Approx. Shipping Weight Lbs. 100 Pcs.
23206	Threaded	6	1¼	26	3150
23206-P	Plain	6	1¼	26	3150
23208	Threaded	8	1¼	29	3500
23208-P	Plain	8	1¼	29	3500

HUBBARD AND COMPANY

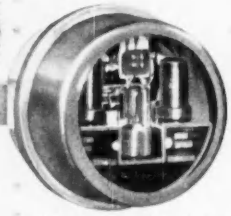
ESTABLISHED 1843

PITTSBURGH • CHICAGO • OAKLAND, CALIFORNIA

"Hang the Load on Hubbard Hardware!"

Fisher-Pierce Photoelectric Controls

CUT STREET LIGHTING COSTS



Series 63500 30 Amp. Contactor

Fisher-Pierce Photoelectric lighting Controls have a continuous record of low-cost service by more than 600 electric utilities in more than 17,000 installations.

Fisher-Pierce should be on *your* "Standards" list. Controls for examination and test can be shipped immediately from stock.

Approved by street lighting engineers and maintenance men throughout the world, Fisher-Pierce units offer a simplified Photoelectric relay for control of multiple or series street lighting systems. Fisher-Pierce controls give you long tube life (20,000 hours or more), easy servicing, (plug-in chassis construction), *no resetting after power interruptions.* In other words, exceptionally *low maintenance costs.*

Series 63500 5 Amp. Contactor

Models available for direct-connected lamp loads up to 3000 watts, for pilot-wire relay systems, and on-switch controls for series systems.

Ask for Bulletin 63500

The FISHER-PIERCE COMPANY, INC.

51 CEYLON ST., BOSTON 21, MASSACHUSETTS

but has been developed for installations where the vertical type is necessary or desirable. The only difference other than the physical arrangement of parts, is that the process of expulsion acts vertically instead of horizontally. The manufacturer states that, like the horizontal type, the new vertical design extinguishes the follow arc before it reaches the first current zero.

The new arrester is made in three sizes with voltage ratings of 3 kv, 6 kv and 9 kv.

•

Rainshield Sticks

SAFETY FOR THE lineman was included in the design of the newly developed "Rainshield Sticks" of the James R. Kearney Corp., 4236 Clayton Ave., St. Louis 10, Mo.

The plastic rainshield gives added insulation to hot sticks when necessity dictates working energized lines in the rain. The shield breaks the moisture path and keeps the upper portion of the hot stick dry.

The shield forms a chamber, sealed at the upper end, with an air gap at the lower end to break the flow of moisture down the stick, thus providing an added safety factor.

The rainshields are available on all standard hot sticks, or may be obtained separately for mounting on 1½, 1¾, 2, 2½ and 3 inch poles. Fiberglas Rainshields are also available for use with Shamrocks or Lifeline poles.

•

Load Centers

A NEW LINE of load centers that at least substantial savings in space which will increase single wiring room has been developed by Murray Manufacturing Corp., 4250 Atlantic Ave., Brooklyn 10, N. Y.

Available in models for 2, 4, 6, 8, 12 circuits, these smaller load centers are made possible by newly designed circuit breakers of considerably smaller dimensions. While equipping the power-full magnetic pull, other new circuit breakers are interchangeable with office popular type, designs and individually limited breakers.

Depth has been reduced to 3 inches to permit flush installations in wall. In addition, a simple 3-inch plastic line, illuminated is provided. In the larger models a single bus bonding device reduces the number of connections to an absolute minimum. Wiring in the enclosure is further simplified by the fact that breakers of different ratings can be assumed on whichever gutsbars are most convenient for connecting the

particular circuits required on individual jobs. Breakers are available in ratings of 10, 15, 20, 25, 30, 35, and 50 amps.

The small new breakers used in these new Murray load centers employ the principle of fully magnetic operation. Since these breakers are free from thermal effects, they can be mounted in warm locations, in poorly ventilated panels, or even in direct sunlight without false tripping below rated load. An hermetically sealed time delay unit enables this type of breaker to carry harmless temporary overloads, yet permits it to trip instantly on dangerous overloads. There is no complicated resetting procedure to restore service after tripping. The handle operates like an ordinary switch, yet it has four positions: "on" and "off."

•

Neoprene Jackets

Portable electrical cords and cables with jackets certified to contain not less than 60 per cent by weight of new Neoprene are being introduced by Western Insulated Wire Co., 1001 E. 62nd St., Los Angeles 1, Cal.

A further innovation in the line is the branding of the words "Rubber and Neoprene Certified" on the jacket. In addition to the name, the size, type, rated voltage, current capacity, number of conductors, and Pennsylvania and U. S. Bureau of Mines approval number are "ink-mized" upon the jacket.

•

Safety Switches

Assured security has been made by Concord Switch Corp., Brooklyn 11, N. Y., manufacturers of service equipment and safety switches, that their new 500 ampere front operated, single throw safety switches are now in production and available for immediate delivery.

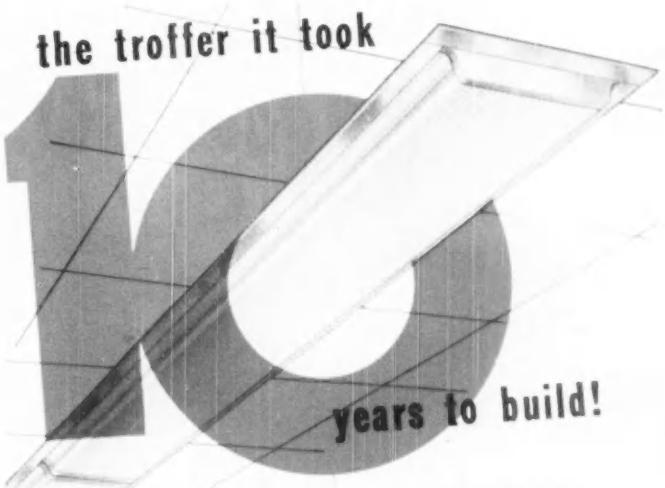
Available with or without electrical group plate, the switch has a rugged, durable laminated arc chamber and action of full floating contacts, solder less pressure wire connectors, all the line side and all ground connections accessible from the front.

Complete catalog sheets provided and the heavy duty Closers have cutts and Tuf Gear for easy wiring requirements.

Cat. No. 674NP, "Six" poles, 3 solid neutral and 2 one line to ground poles. Cat. No. 672P with 2 poles, 1 solid neutral and 2 plug fuse receptacles and Cat. No. 742NP with 4 poles, 1 solid neutral and 1 plug fuse receptacle, one line neutral.

All switches are horsepower rated and have wide angle closers or throws.

the troffer it took



years to build!

Guth LITE-BLOX

the ONE answer to every troffer need

From 10 years' experience with thousands of recessed troffer problems comes this dynamic development — a complete new "packaged" line that is far more . . .

SELLABLE!

- "Hand-Crafted" appearance with tailored trim
- Infinite design freedom — any pattern based on 12" grid
- 20 sizes of popular standard and slimline lamps
- Wide range of diffusing and shielding media

STOCKABLE!

- One basic unit for 31,360 troffer combinations
- Simplified ordering — one number for a complete row
- Flange types on hand can be quickly converted to teebar — or vice versa

INSTALLABLE!

- Complete units ready to install — no joiners
- Precision built on advanced type machinery — easy to align
- Patented end KO's assure accurate foot lengths — no trimming at end of rows

For full details call your nearest GUTH resident engineer or write for Bulletin 869-D

Guth LIGHTING

299

THE EDWIN F. GUTH COMPANY • ST. LOUIS 3, MISSOURI

a hit for your kit!

BURNDY SERVIT

Here's the handiest split-bolt connector in any workman's kit — the Burndy Servit! Ideal for taps, dead ends, service entrances, motor leads, junction boxes, and ground wire to neutral connections.

For long years of low resistance, trouble-free connections, ask your Burndy distributor for Servit!

- Servit forces wires into tight contact!
- Made of expertly balanced alloys for high conductivity and for strength.
- Serrated pressure bar resists crushing and spot loading.
- Withstands overload, vibration and corrosion.
- Compact — rounded edges tape easily.
- Listed by Underwriters Laboratories Inc. from No. 10 thru 4/0 AWG.

BURNDY NEW YORK 54, N. Y.

WESTERN BRANCH: VERNON 11, CALIFORNIA • CANADA: BURNDY CANADA, LTD., TORONTO 8

most switches for industrial equipment or residential appliances such as water heater, oil burner, etc. The switches are also suitable for use as service equipment.

ELECTRICAL BOOKS

A Measure for Greatness, by David O. Woodbury. McGraw-Hill Publishing Co., 330 W. 42nd St., New York, N. Y.

The story of Edward Weston, well known pioneer in the field of electrical instruments and founder of Weston Electrical Instrument Corporation, is told for the first time in this biography.

Weston, born in England in 1850, came to this country in his early manhood. He promptly went into business relating to electroplating apparatus and later expanded the business into developing electric lighting machinery and apparatus. Today, the huge Weston Electrical Instrument Corporation, one of the world's largest producers of electrical devices for measuring "invisibles," stands as a monument to the man whose creative mind and nimble fingers produced 500 patents, many of them recognized as scientific milestones.

Among the many contributions made to electrical engineering by Edward Weston was the lighting of the Brooklyn Bridge by two rows of Weston arc lamps powered by the Weston dynamo. Famous designer and builder of dynamos for electric lighting service, Weston is also known as the principal developer of accurate electrical measurements by portable instruments because of his many discoveries along these lines. He invented alloy metals of very low temperature coefficients or at even a negative coefficient for use in low-temperature coefficient shunts. He produced a standard electrical battery cell to be used in standardizing measurements of voltages and he devised many more electrical instruments, all of which are enumerated, and many pictured, in this volume.

Emphasizing the man's personal characteristics, the story goes from his first experience with electricity and the development of his many inventions through the establishment of the Weston Electrical Instrument Corporation and his unchecked legal entanglements. Chapter by chapter, the book proceeds through the places of his life, his apprentice, bachelor, engineer, and the man he found the least.

TRIANGLE'S TRIEX

Non-Metallic Sheathed Cable

SAVES TIME
SAVES TROUBLE
SAVES MONEY

at Every Connection

You save time, save trouble, save money at every step of the wiring job when you use TRIEX Non-Metallic Sheathed Cable. Its "Glazon" covering handles cleaner, stands more punishment, takes less space, bends easier around corners — yet affords extra protection for year-in, year-out dependability.

And an important feature, in the smaller sizes of TRIEX, saves you still more time in making every connection. No longer must you wrestle with paper curlicues to prepare the wire for stripping — on sizes 14 and 12 TRIEX, extra insulation thickness takes the place of these paper wraps. Actual tests prove this new TRIEX prepares for stripping five times faster!

Take Your Choice

TRIEX
(Rubber Insulation)

THERMO-TRIEX
(Thermoplastic Insulation)

Both types listed by Underwriters' Laboratories for 60°C. service, 600 volts. Approved by R.E.A. Two or three conductors, with or without ground wire, No. 14 through No. 4 A.W.G.

Get TRIEX Fast from our CHARLOTTE warehouse
which also stocks the complete line of Triangle Wire, Cables and E.M.T.
1301 W. Morehead St.
Charlotte, N. C.

TRIANGLE CONDUIT & CABLE CO., INC.

1906 JERSEY AVENUE • NEW BRUNSWICK, NEW JERSEY

IT *MUST* BE RIGHT!

Catalog No. 500 Gives Full Details Of the Complete Triangle Line:

"Glazon" & "Trioseal" Building Wire • "Tricon" Control Wire • "Adaptal" General Purpose Wire • "Triex" Non-Metallic Sheathed Cable • "Trioprene" Trench Cable • Service Entrance, Parkway, Power & Varnished Cambric Cables • "Tristeel" Flexible, Thin Wall & Rigid Steel Conduit

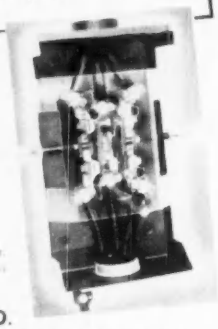
ADEQUATE WIRING — THE KEY TO THE MODERN HOME — SERVES AND SAVES

The Key to Adequate Service!

DUNCAN'S NEW HEAVY DUTY METER MOUNTING DEVICE is the economical method of metering modern, higher capacity services. Adequate wiring is a must for modern homes—adequate wiring requires adequate service and meter capacity.

200 AMPERES OF SERVICE CAPACITY WITH SELF-CONTAINED SOCKET TYPE METERS

- **APPLICATION**
  For use with any standard 4 or 5 terminal self-contained socket type meters — single-phase, 3 wire net work, or 3-phase, 4 wire. May be used with separate demand or combination without and demand meters, thermal or mechanical.
- **WEATHERPROOF CASE**
  Galvanized steel. Suitable for indoor or outdoor mounting. 2" or 3/4" hub at top, 2 and 2½" knock-outs at bottom.
- **NO SERVICE INTERRUPTIONS**
  By-pass clamps permit removal or testing of meter without interrupting load. See illustrations.
- **METER TESTING**
  Standard test jack may be used for testing meter in conventional manner.
- **LOW COST INSTALLATION**
  The H.D. device, list price $55.00, permits the use of self-contained meters on services to 200 ampere capacity.



Above—*Completed installation.*
Right—*Meter removed, by-pass clamps in place*

Duncan Type H. D.
Heavy Duty Meter Mounting Device

THE TYPE H. D. Heavy Duty Meter Mounting Device provides a compact method of connecting conductors up to #0000 copper, or 250,000 C.M. aluminum, directly to the terminal blades of a socket-type meter with ease and safety. The H.D. Device requires a minimum of space for metering equipment in its current range. Overall height is 18", width, 9". The H.D. Device is particularly applicable on services above 100 amperes and up to 200 ampere capacity. For complete information send for Bulletin No. 164. DUNCAN ELECTRIC MFG. CO., Lafayette, Indiana.

makers of uniform meters for nearly fifty years

LAFAYETTE INDIANA

R&S **LIGHTING FIXTURES**

Complete Line WATERPROOF DUST-TIGHT

Meet **ALL** Standards **PLUS**

SCIENTIFICALLY DESIGNED REFLECTORS with highest reflection factors.

STURDY CAST METAL guard.

SPECIAL LAMP RECEPTACLE design seals wiring chamber and conduit system.

EXTENSIVE LINE in cast aluminum, brass or iron — corrosion resistant.

SIZES 60 to 500 Watts.

COMPLETE LINE of Explosion-Proof type for Class 1, Groups C & D.

HIGHEST EFFICIENCY—LOWEST MAINTENANCE insured by 48 years of design and manufacturing experience.

A12 *Write for catalog No. 9048-11*

SINCE 1902

RUSSELL & STOLL COMPANY, INC.
Precision-Built Electrical Equipment
125 BARCLAY STREET, NEW YORK 7, N. Y.

Wiremold Plugtrim

Line Amerities to its line of 1900T Plugtrim, a new quarter round development designed for use with their 1900 Plugmold, has been announced by the Wiremold Company, Hartford 10, Conn.

With a capacity for 5 pair twisted telephone wire, Plugtrim serves the dual purpose of a quarter round trim for Plugmold and a channel for carrying low potential wiring such as is required for telephone and signal systems.

Ease of installation is one of the outstanding features of this new development. This is made possible by the use of the 1905T Clip which is designed so that it may be slipped behind the already installed Plugmold, or the scored section of the clip broken off and the clip itself mounted to the surface just above the 1900 Plugmold.

Full information on this new item is given in the company's Form 556.

•

Selling Light

(Continued from page 27)

strip of neon that lights the window and neglects the merchandise, which is going to remodelize. They will have to in order to compete with their more aggressive competitors.

We installed one particular job here in Houston, Good Housekeeping Inc. of Texas, that indirectly has resulted in many other installations of this nature. Inasmuch as this is an electrical appliance store, this should be doubly interesting to many readers of *Electrical South*.

From the illustration, it is evident that even from across the street passersby can windowshop. Note that spots are employed to draw attention to certain items the management wants the prospective customer to see.

The spots have another advantage. Fluorescent light is a soft light. It takes a more harsh, brilliant light to bring out the sparkle and brilliance of metal and glassware. To properly merchandise any item, it must be shown to its best advantage.

If you look at the picture closely you will see that enough light is employed to make the floor appear white. The light is reflecting up from the floor, lighting and merchandising the items on the lower shelves in the display units. If there were not this amount of light to start with, the floors would not receive enough light to reflect. And, as a consequence, the store would take on a drab, unenviting atmosphere.

In laying out a lighting arrange-

ment for a retailer, consideration must be given to his color scheme and the type of merchandise handled.

Clothing, for example, absorbs light—it reflects none. If the walls are matte finished, regardless if they are white, they will not reflect light as well as if the walls were done in a gloss finish.

Colored walls will absorb and reflect. The theory of color mixture is not too difficult to understand. White light is a mixture of light of all colors. There are two methods of mixing colors, by the addition of light rays and by the substraction of light rays. As white light is a mixture of red, green, and blue light, all objects that appear white must reflect these colors in equal proportions. Colored objects appear so because they absorb some colors and reflect others. A red object is red because it reflects more red than other colors. Yellow reflects both red and green light together.

Consequently, if you put a blue light on red walls, there being very little red in the light, the wall is going to appear dark. As red reflects red, it absorbs blue and green. It is best for the retailer to limit his color scheme to whites or off-whites, or blue tints.

I predict that within the very near future it will not be unusual to see "unusually lighted retail stores." The picture will have to reverse itself. Which means there is a selling job ahead for the contractor who wants to augment his work with this type installation.

A-W Case History

(Continued from page 25)

Also, it must be sufficiently flexible to be used for new construction, remodeling of old homes, and single rooms.

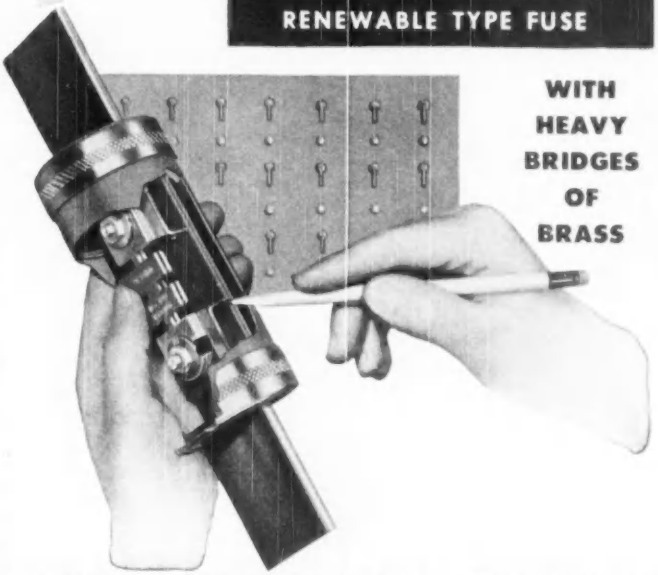
The intelligent approach to the electrical needs of the home is first to determine the electrical equipment (appliances and lighting) that will be required immediately and may be secured in the near future. Inasmuch as most owners or prospective builders understand little about wiring, we believe that the use of check lists provides an excellent sales tool for laying a sound foundation for the installation of adequate wiring.

We've devised check lists which tabulate the appliances and lighting need room by room in the home for which electric service will be required. At the side of each entry is a box for a check mark to indicate whether the item is now in use or expected to be placed in operation in the near future.

NEW

Monarch HEAVY DUTY

RENEWABLE TYPE FUSE



WITH HEAVY BRIDGES OF BRASS

DESIGNED TO WITHSTAND TEMPORARY EXTRA HEAVY OVERLOADS

Approved by Underwriters Laboratory

Cool . . Truly Aligned . . Maximum Use of Brass . . . Adding up to Lower Power Waste Than Ever Before! And Here's How!

This new heavy duty fuse incorporates many time-tested Monarch features. The newest, thick brass bridges widely separating the terminals from the fiber bar and made with ventilating holes—allow ***maximum dissipation of any internal heat.***

The Monarch method of locking these bridges securely to the terminals and fiber bar, together with Monarch's positive lock construction and compressed tension washers, insures ***permanent true alignment.***

Monarch RENEWABLE Fuses

. . . IMPROVED SERVICE PER DOLLAR INVESTED

SPECIFY **Monarch** FOR SUPERIOR **FUSErvice**

MONARCH FUSE CO., LTD.

118 E. First Street — Jamestown, N. Y.

PRECISION BUILT

CUTOUT BOXES

JUNCTION BOXES

WIRING TROUGHS

TELEPHONE CABINETS

WEATHER-PROOF CABINETS

WEATHER-PROOF SEAM WELDED JUNCTION BOXES & FLOOR BOXES

PEDESTALS & FLOOR BOXES

TRANSFORMER CABINETS

SPECIALS TO CUSTOMERS REQUIREMENTS

by

METAL FABRICATING SPECIALISTS

B & C METAL STAMPING CO.

NEW ADDRESS — 590 MEANS STREET N. W. — ATLANTA, GA.

BUCHANAN
Electrical Products Corporation
1290 CENTRAL AVENUE
HILLSIDE, NEW JERSEY
WAverly 3-7474

AVAILABLE THROUGH ALL LEADING ELECTRICAL DISTRIBUTORS

— WRITE FOR CATALOG —

BUCHANAN—
for the BEST *in Electrical Fittings*

In addition, blank lines are provided for writing in those items which are peculiar only to the structure in question.

How Check Lists Are Used

The sales person contacts the customer and together they go through the applicable check lists, placing check marks beside the items now in use or expected to be used in the future. This initial step provides a safeguard against the possibility of forgetting items for which a costly installation might later be required. Also, the sales person is afforded an excellent opportunity to sell the greater use of efficient and economical electric equipment. After the sales person has obtained sufficient information so that he can visualize the potential uses of electric service, he then leaves the customer and proceeds to prepare plans for an adequate wiring installation which will meet the standards of safety and provide the ability to serve.

From the check lists the sales person is able to prepare summary sheets which indicate, room by room, the outlets and switches together with the necessary circuits and service entrance equipment. Following this, he draws a single-line sketch which embodies all of the aforementioned information in symbols.

After carefully rechecking his recommendations, he records to assemble the check lists, summary sheets and sketch into a booklet. The front cover provides for the insertion of the customer's name. The thought behind the booklet is that it should be personalized as much as possible.

He then makes an appointment with the customer to present the wiring recommendations. Upon contacting the customer, it is stressed to him that the booklet has been specifically prepared to fulfill his requirements. The details of the plan are presented in much the same manner as though the customer and the sales person were actually walking through each room of the home. The explanation is enhanced through the use of down-to-earth similes such as the wall-switch, sagging clothesline, etc.

The booklet is then given to the customer as the company's recommendations for an adequate wiring installation. The sales person offers to assist the customer further in working with the electrician to follow the plan.

Reaching Our Allies

In the field of adequate wiring there are woven together the requirements of design, engineering, sales, product, installation and customer

satisfaction. To fill the prescription are the architects, builders and electricians. We believe that these groups become in essence the consultants of a successful adequate wiring program.

As a means for initiating their active support, we invited these groups to attend a series of dinner meetings which were conducted in each of our districts. The meeting was opened with a humorous little skit concerning a huge octopus outlet and was followed by the presentation of the film, "Dawn of Better Living," which tied in with the skit. Next our promotion and advertising material was presented by means of Visual Cast slides. Then the check list booklet was presented and a dummy problem was worked out on the Visual Cast. To each member present we gave a copy of the latest National Electrical Code and a copy of the Adequate Wiring Reporter, in which Mrs. Schaefer reported on our program.

To the architects we've stressed the need for planning better wiring for all buildings and urge that they frequently refer to the check list as a guide for the location of switches, convenience outlets, circuits and service entrance facilities.

To the electricians we've stressed the fact that adequate wiring means more business, greater profits, more and better satisfied customers. Also, it may well be emphasized as a means for eliminating a considerable amount of pick-leg competition.

To the builders we've stressed that adequate wiring offers an excellent sales tool for them to employ on today's market. We urge careful planning of every room so that it will provide the maximum in electrical living for many years to come.

We offer to all these groups, free of charge, the services of our sales people in planning to make and contacting customers, the use of our check lists and our promotional material. We also send them copies of our advertisements, prior to insertion in the newspapers, and numerous promotional bulletins.

Utility's Help Welcomed

The results from these meeting have indeed been most gratifying. District managers have reported that electricians are working with them more closely than ever before. One of our commercial service representatives reports that in the two weeks which had elapsed since then meeting he had had more requests to work with electricians on wiring plans than he had had during the entire longer of his assignment in that district.

The morning following one of our meetings, an electrician came into the office with a blueprint for a $50,000 residence. He stated that he desired to take advantage of our free service and have the blue print checked for adequacy before he started the job. This, of course, offered an excellent opportunity for us to assign a qualified service representative to sit down with the customer and the electrician to go over the entire layout. This contact resulted in an installation of three-wire service, 200 amps., more than 200 outlets, and 50 circuits.

In the field of low cost housing we recently contacted a builder who was planning an 1,100 home project. These homes are small and consist of living room, dinette, kitchen, bath and one bedroom. In this instance the builder had planned a two-wire service and two circuits of No. 14 wire. We were successful in raising his plans to include a three-wire service, four circuits of No. 12 wire, and provision for four spares.

To keep track of the wiring being prepared and presented by our customers, our sales people include a breakdown of them on their weekly reports. This information is extracted in our general office and recorded on individual forms for spot checking and study. For the period of April through December our sales people prepared 942 wiring layouts, of which 41% were for residences. The balance (22%) were for commercial and farm buildings. In the near future we plan to convert these installations to determine the added comforts and conveniences which adequate wiring has brought to the customers.

Thus we sincerely believe that the promotion of adequate wiring in rural areas brings additional kilowatt hour consumption and increased revenues from existing facilities. It makes possible greater electrical living and enjoyment for customers. And more business, larger profits and better satisfied customers for electricians, builders, wholesalers and manufacturers.

Serving Industry

(Continued from page 26)

is such that I have no qualms about the operation of cranes on any particular job. We haven't had any leading in few years.

Getting started in industrial contracting, Mr. Carter points out, is a matter of getting to know engineers and making contacts, and then beginning to build a reputation on these first jobs. Besides work in textile mills, Carter points out that there is plenty of work that can be done for

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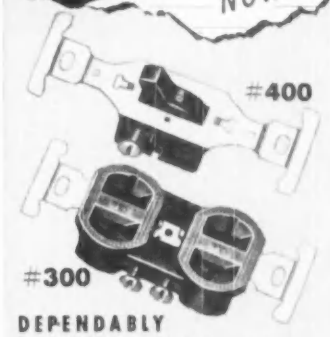

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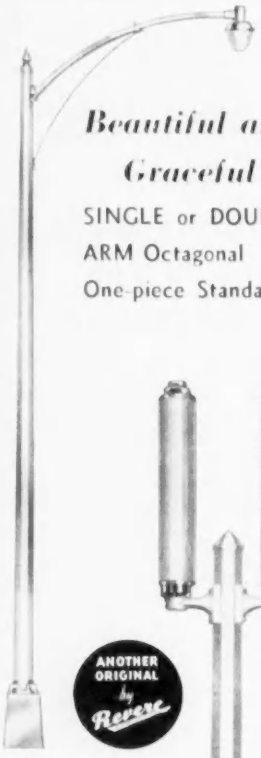

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feed mills, cotton gins—and recently this company even acquired a mill that plans to manufacture cloth from glass.

Carter's main idea is to keep a flow of work coming in to his company so that he can keep all his crews together. The commercial work he does is mostly on call and by special request, and he has a complete shop in his building with modern tools, to enable the men who are working locally to handle such work efficiently.

Each of the workmen training for journeyman jobs are given a raise each six months until they reach the top scale.

A remarkably low rate of tool loss is suffered by this company because of the efficiency with which jobs are carried on. Special tools include power saws, power drills, hydraulic and hand pipe benders, a lathe, a cable winding machine. No special scaffolding is used here because Carter has found that the A-frame ladders usually provide height enough for the average mill job, where ceilings run only from 12 to 14 feet.

Estimating, much of which is done by Vice President Roy Kitchens, is accurate, and must rule come out in cost to within two per cent of the estimate, according to Carter.

The operation of this company is deceptively simple, but perhaps its greatest success lies in that simplicity—training good men, keeping them busy, and specializing in operations so that each journeyman is capable of handling any job.

A-W Demonstration

(Continued from page 29)

to begin the next performance. Failure to flip the last three switches will result in the last three lights being on when the master is flipped to the "Bad" circuit. Also the relay will act, burning the 5-amp fuse.

At this point, the operator flips the master on and off a few times, notes that the light does not dim, and notes the small drop in lighting and voltage. He also points out with the good lighting load, 1000 watts, the 15-amp fuse did not burn and the house did not catch fire.

This being the end of the demonstration, the audience usually asks questions.

As a conclusion, I would like to point out that this is a precision-built piece of equipment, built to perform under a variety of conditions. It has been shown at a large number of meetings with unusually good response. However, as you can see by this technical information and the picture, it would take some time, effort, and expenditure to construct a copy of this panel. If any further information is needed, we will be glad to supply it.

Exchange Conference

(Continued from page 21)

having cited were from electrical and home appliances, and the sales of such items require education and demonstration. The retail salesman becomes one of the most important factors in selling this type of equipment. Sales programs now being planned will include great emphasis on sales training and preparation for making demonstrations. Similarly in the considered field are sales of heating, air conditioning, and so on, and much of this buying will be handled as considered buying and will require considerable sales training for the salesmen who will make these sales. Much of this educational work is being handled by road shows and classes of an educational nature conducted by manufacturers.

In these fields where buying is handled through specifications, sales training of a high degree is required. Such schools are industrial heating and lighting, special shows such as the "More Power for Textile Industries," etc., are examples of what is being done to help train the men who must present information to the buyers who follow "specified" buying.

"Selling Power" will determine where this industry goes, Mr. Jewell concluded.

Concluding the Thursday session were addresses by Dr. Benjamin H. Beckhart, economic consultant for the Chase National Bank on "Current

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Economic Trends" and Allan B. Kline, president, American Farm Bureau Federation, who discussed "Free Enterprise Under a Democracy."

Free enterprise requires free markets and freedom from price controls, stated Mr. Beckhart. Our standing on free enterprise will be indicated by our standing on specific issues.

Against a background of rising growth of business activity, Mr. Beckhart asked whether we were facing a catching up period and, if so, what can be done to promote continued growth of business activity on a sound basis.

He then reviewed the factors that entered into our gross national product and their trends. Consumer demand for durable goods and housing appears to have passed its peak, but a temporary recession may bring price reduction that will result in a healthy long-run demand. He indicated that a slight decline might be a desirable adjustment and would not necessarily be a spiralling depression but rather an adjustment that would lead to a long period of high activity in business.

But if such a decline should occur, there are certain changes that should be made in our economy. He said Farm price support should be discontinued. Mr. Beckhart recommended Fair Price Laws should be repealed, certain commodities should be on a free list and tariff reduced on others, and the tax structure should be revised with a more favorable allowance made for industrial depreciation.

If we believe in free enterprise, we should believe in free markets and controlled markets. We should believe in a balanced budget. To do this, we should reduce agricultural subsidies. Also reduce appropriation for veterans, reduce public works, and aviation subsidies.

The United States is the only country of the world today that has a free choice as to the direction it will take. Mr. Kline said after sounding the conference that World War II was the greatest debacle of human affairs in the history of the world, that no final decisions have been made, and the entire world is awaiting to see what we are going to do.

The economic success of this country has no counterpart in the world today or in history. It is said that a peacefully regulated type of free enterprise economy with a freedom of choice on the part of citizens is a distinguishing characteristic.

The most important need for the successful prosperity of our country is high production per man and effective distribution of income.

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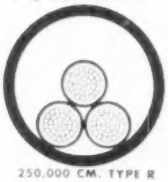
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The pattern of the future is going to be decided by Congress. This is a time for Americans to get busy. It isn't enough just to vote—we shall have to have able men in the Congress, and the responsibility for the rests with the people, Mr. Kline told the group.

First speaker at the concluding session of the Conference was William Naden, director and general manager of manufacturing for Esso Standard Oil Company, who discussed the selection and training of supervisory employees.

Classifying Foremen

Mr. Naden directed particular emphasis to the importance of the foreman in industrial operations. Four types of foremen were described: the "dependent" type—the man who follows rules and regulations to the letter and seeks personal security; the "darter" type—the man who seeks results with little consideration of the human factors involved; the "slip-limit" type—the man who seeks personal advancement and lacks real sincerity in his dealings with employees; and finally the "quarterback" type—the man who endeavors to develop a real team and seeks the common good of all concerned. In the order given, the effect on employees of the four types is apathy, antagonism, discontent, and satisfaction.

Performance ratings as a means of judging foremen were discussed. Among the advantages for this method is the ease in running at ratings and the fact that ratings for different departments can be compared on a common basis.

The trend toward foremen's jobs becoming dead end jobs must be changed to preserve the fundamental that has characterized American industry — equal opportunity for advancement.

Special features of supervisory employees' training included in the Esso program are special two-week foreman training schools at small groups yet about 15, a Roper survey of foreman attitudes, periodic conferences on the job training for supervisory employees, preparation of replacement tables incorporating the men recommended to replace supervisory and management employees in business seven, careful study of the number of men reporting to each supervisory employee with a view of keeping the number at a point where supervision is most effective.

The most important objective in the training of supervisory employees is to have such employees understand the management viewpoint and

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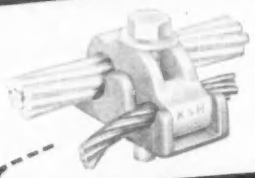

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second, to have confidence in the viewpoint.

Standard rates, rising costs, and incentive for more attractive returns on investment are the factors that emphasize the need for controlling costs, James M. Barry, president of Alabama Power Co., told the Conference in his address on "Controlling Costs."

Important factors in controlling costs are proper organization and adequate training of personnel, system planning, anticipating load growth and change in load centers and time reducing system losses, careful study of new generating facilities, whose component costs have doubled recently, in order to effect all economies possible, effective application of cost reducing developments in design and construction of transmission line facilities, controlling construction costs by acting as general contractor where work is to be handled by subcontractor, reduction of operating expense by giving consideration to the long term offering the best possibilities for cost reduction—labor, and bad investigation of integration possibilities with non affiliated companies, comparison of other expenses such as accounting costs, etc., with those of comparable companies, analyses of savings through mechanization of shops, accounting, etc.

Senator Byrd Speaks

One of the highlights of the conference was the address by Senator Harry Byrd, United States Senator from Virginia, at the annual banquet meeting of the Exchange. In the course of his talk, Senator Byrd challenged President Truman to show his stand against socialism. He said that instead of indulging in inventive speech, the President ought to answer these questions:

"Is he for or against socialism, as he is advocating the nationalizing of Congress to adopt socialized medicine?

"Is he for or against socialism, when he is advocating the Brannan plan, which inevitably means socialized agriculture?

"Is the President in opposition to or in favor of socialized housing?

"Is the President in opposition to socialism, when he is constantly advocating an extension of the number of those who receive Government benefits?

"Asserting that 'deficit spending and socialism are twins of evil,' Senator Byrd said President Truman is proposing to increase Government spending at the rate, beginning July 1, by more than eight billion dollars

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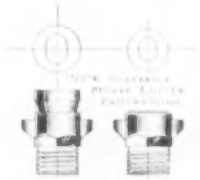

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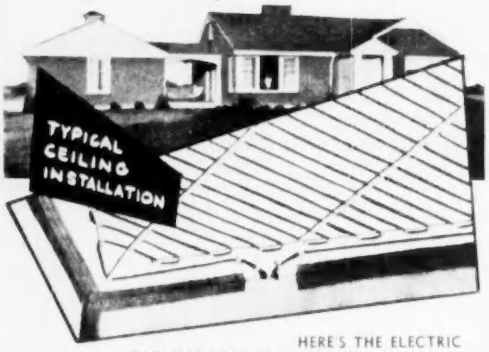

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Up to 24 x 3 x 3 feet *

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IN HAZARDOUS LOCATIONS

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For use in locations where highly flammable materials are manufactured or handled.

Rugged, flame-tight cast aluminum alloy housings render internal explosions harmless, and insure safe operating temperatures. Threaded construction permits easy access to interior for wiring and lamp replacement. Available in many types and sizes.

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For use in locations where flammable dusts are present in quantity.

Strong, one-piece cast aluminum alloy housings are designed to exclude dust from the interior and to avoid accumulation of dust on the exterior surface. Available in many types and sizes.

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over the figure for 1948, when the budget was balanced.

The Virginian said more than half of this would be in domestic civilian expenditures.

Two speakers from outside the electrical industry were featured at the closing session of the conference. "What the Public has a Right to Expect from a Utility" was the subject of Wright Bryan, editor of the *Atlanta Journal*. He was followed on the program by Dr. Clifton L. Gaines, Jr., who spoke on the "Battle for Men's Mind."

Off-Peak Rate Load Studies

(Continued from page 32)

The average total annual consumption per water heater including off-peak service is 5596 KWH. The annual revenue per heater is $42.12.

The following tabulation shows a comparison of the return from controlled versus uncontrolled service:

Controlled Service

(a) Investment in additional equipment	$31.50
(b) Annual operating expense	3.40
(c) Energy cost	32.18
(d) Operating expense plus energy cost	35.64
(e) Annual revenue per heater	42.12
(f) Revenue minus operating expense and energy cost	16.48
(g) Per cent return on investment	52.3%
(h) Total expense (operating, energy, fixed charges)	77.37
(i) Net operating ratio	183.6

Uncontrolled Service

(a) Cost per KW of additional capacity	$[illegible]
(b) Cost of additional capacity per heater	259.44
(c) Gross revenue (5596 KWH not off-peak rate)	[illegible]
(d) Revenue less energy cost	[illegible]
(e) Per cent return on investment	[illegible]
(f) Total expense (operating, energy, fixed charges)	48.31
(g) Net operating ratio	156

Results of the studies indicated that the 10-hour charging period is adequate for the six heaters and the meals recommended by the company.

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St. Louis	1913 Washington Ave., Ch. 6510
El Paso	208 N. Piedras St., Main 7645

HELWIG SPEER

HELWIG CO., Carbon Products

Makers of Multiflex and Transert Brushes

NON-METALLIC ... RN. & GROUND WIRE

931-V

SERVICE ENTRANCE CAP

1819

Sold Thru

Your Local Wholesaler

ATLANTIC CONDUIT FITTINGS CO.

BOSTON, MASS.

"MY CUSTOMERS ARE MY BEST SALESMEN"

says John J. Rickert, V. P.
American Ventilating Corp.
27 Park Place, New York City

—another successful seller of American Blower Ventilating Equipment

"Time after time I've had folks come in and ask me to install an attic fan just like the one installed in a neighbor's house," says John J. Rickert. "Invariably, the fan they wanted was built by American Blower.

"After 18 years in the ventilating business, I'm convinced that in the long run it pays to sell and install quality products built and backed by a reputable manufacturer.

"And that's why I recommend American Blower Air Handling Equipment whenever I can. It's quality equipment, sensibly priced, easily installed, and carries capacity ratings that are accurate and Certified. A customer gets full value for his money."

If you're interested in building a better business where your customers are your best salesmen, sell American Blower Air Handling Products. Ask your nearest American Blower Branch Office for details.

AMERICAN BLOWER CORPORATION, DETROIT 32, MICH.
CANADIAN SIROCCO COMPANY, LTD., WINDSOR, ONTARIO

Division of American Radiator & Standard Sanitary Corporation

Packaged Ventura Attic Fan—Built for vertical operation in low bridge attics. Only 10 easy steps to install. Ratings are Certified. A real profit maker.

Model A Ventura Fans—Smartly styled. No exposed wiring. Smooth, easy-to-clean surfaces. Built in capacities from 1000 to 9700 cfm free delivery. 18 sizes.

Utility Sets—Fine as supply or exhaust fans in stores, schools, etc. Have Aileron Control for regulation of air flow. Capacities from 517 to 17,965 cfm at ⅛" SP.

SELL QUALITY!

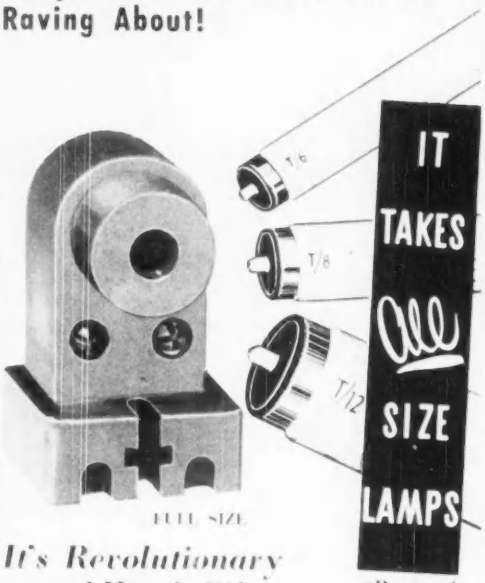
AMERICAN BLOWER

Air Handling Equipment

Serving home and industry AMERICAN-STANDARD • AMERICAN BLOWER
CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON

Multi Scopic

The New Standard Style SLIMLINE Lampholder That The 'Trade' Is Raving About!



FULL SIZE

It's Revolutionary —and Here's Why . . .

Patented
U.L. Listed

1 In the MULTI-SCOPIC only the lamp pin is inserted into the socket—NOT the lamp. Thus diameter of lamp is immaterial and it will TAKE ANY SIZE.

2 It has the patented Kulka "Telescopic" feature (in high voltage unit) that grips the lamp firmly and permits variation in lamp lengths.

Still More Features

Small, compact size. Made of white Urea plastic. Fits all standard fixtures and requires only single screw mounting.

U L APPROVED for outdoor and indoor closed fixtures and signs. Listed also by CSA.

Write or Wire Immediately For Full Information to Dept. ES.

KULKA ELECTRIC MFG. CO.
30 SOUTH ST., MT. VERNON, N. Y.

ELECTRICAL SOUTH

May, 1950

This is one section of the current issue of Electrical South.

Appliance Section

Household and Commercial Appliances • Radio • Television

SELLING WITH MINIATURES—The miniature appliance models shown here take uncertainty out of kitchen planning. They allow the prospective buyer to see how ensembles of new matched appliances would look in her own kitchen. The realism and accurate detail incorporated in these miniatures have greatly increased their effectiveness. Arrangements can be photographed to provide a permanent record of the prospects' preferences. Where sales are not completed immediately, future mailings can be made personal and specific by including a 5c photographic print of the prospect's own kitchen modernization plan.

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Service First 85

Copyright, 1950

ELECTRICAL SOUTH, 806 Peachtree St., NE, Atlanta 5, Ga.

1ST TO BUILD A FLOOR MODEL CIRCULATOR

1ST. The First Floor Model Circulator in America Was a KISCO!

1ST. First Then and First Now in Performance!

1ST. First in Beauty! First in Value!

1ST. First in Quality All Steel Construction!

There Are Many IMITATIONS
. . . But ONLY ONE . . .

KISCO

CIRCULAIR

The "Successor to the Fan"

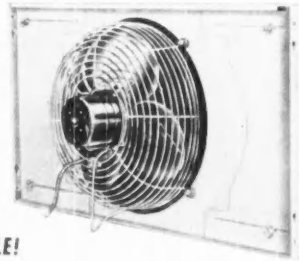
REG. NO. 395746

REGAL AIRE

Kisco WINDOW FANS

Have Everything!

The last word in quiet, cool comfort. Each unit carefully engineered, designed and constructed to insure quiet, efficient performance. Listed by Underwriter's Laboratories and fully guaranteed by Kisco. Six adjustable models . . . 3 sizes!



ALSO A REALLY EFFICIENT ***REVERSIBLE!***

LO AIR

The Most Complete Line of Air Circulators And Coolers on the Market

$17.95 To $75.95

COCKTAIL TABLE

THE TABLE AIR

UTILITY

KISCO COMPANY, INC.

2400—40 DEKALB STREET, ST. LOUIS 4, MO.

Dominion APPLIANCES

Here are gifts worthy of "all out" promotion! The season is here—in fact, every month is opportunity month in the bridal market when promoting these outstanding appliances!

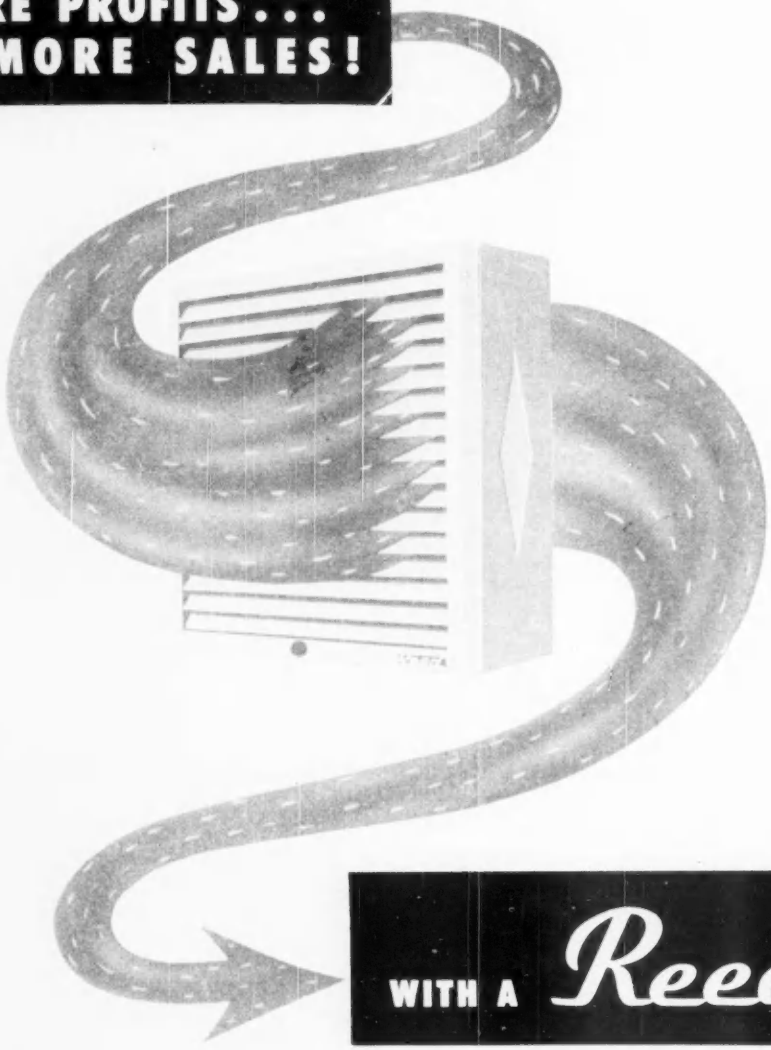
The "Grid-O-Matic" (above left)—Breath taking modern styling . . . every day utility. Makes a huge, tempting waffle that will serve four people at one sitting—uniform, constant heat, thermostatically controlled, produces highly pleasing, uniformly good results. Or, quickly turn the same grids (no extra set of grids to buy or store) and you have a spacious griling or cooking surface that becomes invaluable. It's so handy, so dependable and has so many uses. No wonder the "Grid-O-Matic" is winning praise everywhere!

The "Pop-O-Matic" Toaster (above right). Competely automatic—another member of the Dominion line of "Family Favorites" which has also won immediate acceptance. Superb styling, mirror-like chromium finish, unfailing delivery of appetizing toast, shaded to taste, combine to provide a toaster that would delight any bride.

Makers of a full line of table appliances—available through reputable distributors across the nation.

DOMINION ELECTRIC CORPORATION
MANSFIELD - OHIO

MORE PROFITS . . . MORE SALES!



WITH A *Reed*

For the fan that will give your customers the trouble-free service that every dealer hopes for, a Reed Unit-Fan is the best 1950 buy! Each model — window, attic, portable and industrial fan — combines those features most often looked for in fans . . . Quietness, Powerful Air Delivery, Reversible Operation and a long life of Trouble-Free Service . . . and, don't overlook the Reed Vertical Air Discharge Unit which requires only 13¾ inches attic head clearance. Then too, PFMA Certified Ratings of Air Delivery are a guarantee to the dealer as well as to the customer. The dealer is also backed by the company's extensive consumer advertising campaign. Dealerships are now open . . . write for catalog and prices today!

R-U-F

REED UNIT-FANS, INC.

Manufacturers of Ventilating Equipment

1001 St. Charles Ave., New Orleans 8, La., U.S.A.

Certified Ratings

Monotubes

Provide All the Advantages Women "Shop" for

Easier Cleaning of drip pans! Here is a feature Mrs. Range Buyer appreciates instantly. Exclusive "Swivel-Action" Monotubes are engineered so that a "flick" of a finger swings the smoothly operating coil up and out of the way to highlight the easy cleaning advantages. Housewives quickly see that with Monotube-equipped ranges, foods never need harden onto the drip pan . . . note that messy scrubbings can be eliminated.

As Much As 32.8% Greater Contact Area For Faster Cooking.

Here is another Monotube feature . . . one that can be quickly translated into lower-cost cooking. The large, sturdy, flat, single coil is understandable proof that Monotubes provide more contact with the cooking utensil. Prospects quickly visualize foods cooking fast . . . quickly see that ranges with Monotubes save them money.

Monotube-Equipped Ranges Have "Extra" Sales Advantages.

Faster, lower-cost cooking. Easy, effortless cleaning of reflector pan! Uniform heat! Simplest construction! No service headaches! These are a few reasons merchandising-minded range manufacturers add *Monotube Sales Appeal* to their ranges. Reasons why they say, "let's standardize on Monotubes, the surface cooking unit with *all* the features homemakers 'shop' for!"

Monotubes Give Range Service Departments a Big Plus!

You will find it profitable to provide customers with efficiently designed, fast-cooking TK Monotube replacement units. Easily adapted to practically any range, Monotubes will show a profit quickly in your service operation. Write us or ask your distributor about the TK Monopack, a complete merchandising package designed to open new profit opportunities to you.

New Catalog provides complete information on adapting TK Monotubes to most any electric range. Write today for free copy.

BOOST SALES WITH MONOTUBES

*T. M. Registered ——— ...They stand alone

TUTTLE & KIFT, Inc.

1823 N. Monitor Avenue, Chicago 39, Illinois

A Subsidiary of Ferro Enamel Corporation

The Name that Built an Industry
BUILDS GREATER PROFITS FOR YOU!

NOW! ***Increase Your Volume with FOUR Deepfreeze Famous Name Appliances . . . Home Freezers, Refrigerators, Electric Ranges and Electric Water Heaters!***

Increase your volume sales with these Deepfreeze *famous name* appliances. The wide consumer acceptance of the great name, Deepfreeze, assures quick, easy turn-over. Deepfreeze stands for only the best! And your customers will be reassured of Deepfreeze high standards when they see the woman-wanted features of our four new home appliances.

Take advantage of the year's greatest appliance selling opportunity! Ask your Deepfreeze Distributor for details today!

Build Your Refrigerator Business Around Deepfreeze Exclusives!

SELL THE ONLY REFRIGERATOR LINE WITH THE EXCLUSIVE Deepfreeze ★ FREEZER COMPARTMENT!

Profit by these great features: • The Deepfreeze Freezer Compartment (research proves this "name" feature means sales for you!) • Exclusive Handy-Bins in Dual Vegetable Crisper • Butter Box with spread control • Swing Shelf with plastic leftover dishes • Dry Storage Bin • Adjustable Shelves • Plastic Meat Tray • Interior Light • Ice Tray • 5-Yr. Warranty.

MODEL W-9
Net Storage Cap. 8.5 Cu. Ft.
Overall Height 61¼"
Overall Width 30¾"
Overall Depth 25¾"
$319.95 Retail Price

MODEL W-11
Net Storage Capacity 10.5 Cu. Ft.
Overall Height 65¾"
Overall Width 33½"
Overall Depth 25¾"
$349.95 Retail Price

MODEL F-9
Net Storage Capacity 9.1 Cu. Ft.
Overall Height 61¼"
Overall Width 30¾"
Overall Depth 25¾"
$249.95 Retail Price

MODEL F-11
Net Storage Capacity 11.3 Cu. Ft.
Overall Height 65¾"
Overall Width 33½"
Overall Depth 25¾"
$279.95 Retail Price

MODEL F-7
Net Storage Capacity 6.9 Cu. Ft.
Overall Height 55"
Overall Width 24¼"
Overall Depth 25¾"
$199.95 Retail Price

GO BUY THE NAME...

Deepfreeze
REFRIGERATORS

© 1950 Deepfreeze Appliance Division, Motor Products Corporation

GO BUY THE NAME · Deepfreeze

HOME FREEZERS • REFRIGERATORS • ELECTRIC RANGES • ELECTRIC WATER HEATERS

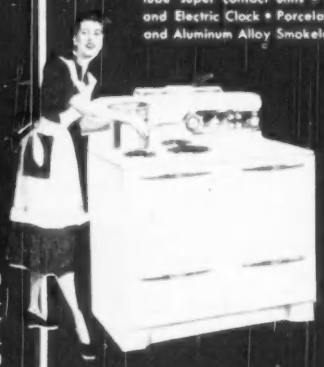
The Industry's FIRST and FINEST Home Freezer—FIRST IN SALES!

LARGER CAPACITIES . . . LOWER PRICES!

New, improved Deepfreeze features maintain leadership and make this the outstanding home freezer buy of the year. Now the De Luxe Model C-12 retails at only $399.95 for added price appeal. There's a model for every size home. The latest addition to the line is the De Luxe Model C-16, and retails for $489.95. *6 Models from* $229.95

Volume Range Business STARTS HERE —WHERE WORK ENDS...*Automatically!*

4 ALL-NEW MODELS . . . NEW FEATURES!



A "beauty" packed full of important features: Monotube super contact units • Automatic Time Control and Electric Clock • Porcelain Enameled Broiler Pan and Aluminum Alloy Smokeless Tray • Interval Timer • Reminder Clock for periods up to 60 minutes • Automatic Pre-Heat Oven Temperature Control • Fluorescent Range Lamp • Appliance Outlet • Broil-Bake Signal Lights • Automatic Oven Light • Inset Pan • Trivet and French Fryer.

Models from $159.95

Another STEADY PROFIT MAKER —*Deepfreeze* Electric Water Heaters

14 MODELS WITH THE "BLACK HEAT" FEATURE!

Sell your customers with Deepfreeze "Black Heat"—the dependable feature that avoids formation of rust or scale, assuring a constant supply of clean, pure hot water. Special magnesium protector rod retards corrosion and contributes to the *long life* of all Deepfreeze water heaters.

Offer your customers *lasting satisfaction* with 10-year liberal protection policy. It includes a standard one-year operating warranty *plus* additional policy against tank failure!

Promote Deepfreeze water heaters . . . display them, sell them!

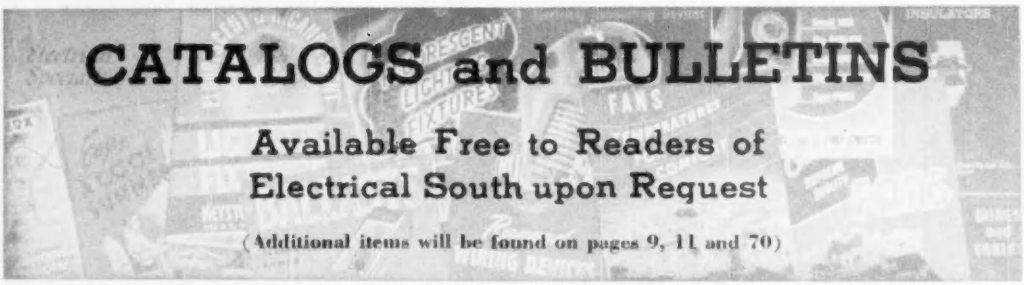
Models from $104.95

SEE WHAT THE FRANCHISE WITH A FUTURE DOES FOR YOU TODAY!

See Your

Distributor RIGHT NOW!

Your Deepfreeze franchise gives you a head start for greater appliance profits. Have your Deepfreeze Distributor explain it in detail! Check the national advertising program and other practical Deepfreeze selling helps with him. You can share in the great new Deepfreeze profits from the very start! Don't delay—see your Distributor today—or write direct for details. Deepfreeze Appliance Division, Motor Products Corp., N. Chicago, Ill.



CATALOGS and BULLETINS

Available Free to Readers of Electrical South upon Request

(Additional items will be found on pages 9, 11 and 70)

2002—Propeller Fans. Application of propeller fans for solving ventilating problems in industrial, commercial, and institutional buildings is described in a 12-page booklet, Bulletin 3146, "1001 Ventilating Problems Solved," available from The Herman Nelson Corp., Moline, Ill.

2004—Air Conditioning Equipment. New Bulletin No. 3158-B, "Central Air Conditioning Equipment," contains comprehensive information on this type of equipment along with charts, specifications, and maintenance instructions. The bulletin has been released by Buffalo Forge Co., P. O. Box 985, Buffalo 5, N. Y.

2006—Renewal Parts. A 16-page booklet, "Renewal Parts for Fans & Appliances," illustrates and lists parts available for appliances of several manufacturers for whom Reading Electric Co., Inc., 102 Park Row, New York 8, N. Y., are authorized distributors of appliance parts.

2008—Automatic Toasters. Latest illustrated catalog sheets on Toastswell electric appliances, including two- and four-slice automatic toasters (both domestic and commercial types) and new Toastswell bun warmer featuring moisture control and removable enclosed heating element are available from The Toastswell Co., 620 Tower Grove Ave., St. Louis 10, Mo.

2010—Water Heaters. An illustrated folder describing Bell Water Heaters and the ten-year guarantee and warranty is available from Adacar Mfg. Co., Napier Field, Dothan, Ala.

2012—Room and Unit Heaters. Electromode Corp., 45 Crouch St., Rochester 3, N. Y., has announced two new catalogs, each of which contains descriptions, complete specifications, illustrations of the units, and shows typical installations, as well as other helpful information concerning heating by electricity. Catalog EC-62 is the industrial catalog, and No. EC-63 is the domestic catalog.

2014—Hot Water Heaters. Informative and well-illustrated data are available from M. M. Hedges Manufacturing Co., Inc., Chattanooga, Tenn., on their line of Merrland Automatic water heaters.

2016—Home Freezers. Full information on the Orlec Sixteen, with a 16 cubic ft. capacity, and the Orlec Super-Seven, with a 7½ ft. capacity, is available from Orlec Freezers Inc., 475 Schaefer Road at Oakwood, Detroit 23, Mich.

2018—Electric Fans. A 28-page, pocket-size illustrated booklet describes in complete detail, this company's line of fans. Booklet available from Emerson Electric Manufacturing Co., St. Louis 21, Mo.

2020—Seco Fans. New bulletins by Seco-Lite Manufacturing Co., 4916 Easton, St. Louis 13, Mo., are now available, illustrating Seco Belt-Driven cooling fans and window fans. Bulletins contain data on installations in homes, apartments, commercial, and industrial applications.

2022—Window and Attic Fans. A four-page catalog piece completely illustrated and containing descriptive information on the new low cost "all in one package" window and attic fans has just been released by the Viking Air Conditioning Corp., 5601 Walworth Ave., Cleveland 2, Ohio. Illustrations of automatic ceiling shutter and automatic electric timer are included.

2024—Electric Water Heaters. New specification sheets are now available for a full line of cylinder and table-top models, featuring the Water Heater, from the White Products Corp., Middleville, Mich.

2026—Heaters and Circulators. The complete line of Monar Products, Inc., Brooklyn 5, N. Y., is included in a folder which gives specifications, features, and prices of all Monar heaters and air circulators.

2028—Fans. Catalogs Nos. 863 and 864, just issued by Chelsea Fan & Blower Co., Inc., 1206 Grove St., Irvington 11, N. J., include descriptive copy, specifications, dimensions, photographs, etc., of a full line of fans for residential, commercial, and industrial uses. These catalogs include information on 17 types of ventilating and comfort cooling equipment varying in size from 12 inches to 60 inches.

2030—Electric Fans & Drills. Signal's complete line is shown in a new catalog just off the press, featuring a wide variety of desk, pedestal, exhaust, and vent fans. Literature on drills, telegraphic equipment, and motors is also available from the Signal Electric Mfg. Co., Menominee, Mich.

ELECTRICAL SOUTH,
806 Peachtree St., NE
Atlanta 5, Ga.

May, 1950

Gentlemen:

Please send me the bulletins and catalogs indicated.

(Print Plainly)

Name _____ **Title** _____

Company _____

Address _____

City & State _____

Circle numbers below. Bulletins and catalogs will be mailed promptly.

2002	2004	2006	2008	2010
2012	2014	2016	2018	2020
2022	2024	2026	2028	2030
2032	2034	2036	2038	2040
2042	2044	2046	2048	2050
2052	2054	2056	2058	2060
2062	2064	2066	2068	2070
2072	2074	2076	2078	2080
2082	2084	2086		

Are You Making Use of Our Reader Service?

The editorial and business staff of ELECTRICAL SOUTH is eager to serve you. One way in which we can help you is to make it easy for you to draw upon the wealth of technical and promotional material available from manufacturers.

In the accompanying pages are the descriptions of scores of useful catalogs, application information booklets, and technical publications. These are available without charge.

Check over the list of publications available, circle the numbers of the ones you need, and mail the coupon to us with your name, title, company and address plainly written. We will tell each manufacturer to send directly to you the information you want.

•

The staff of ELECTRICAL SOUTH will be glad to help you with other problems. They will obtain expert advice for you on both technical and business problems. The services of a number of consultants are available. Whether your problem relates to sales promotion, lighting or wiring layouts, applications of the National Electric Code, or equipment application, it will receive careful attention.

•

Address your requests to:

Reader Service
ELECTRICAL SOUTH
806 Peachtree St., NE
Atlanta 5, Ga.

The Outstanding New

CHROMALOX

ROCKET

The premium package, 1000 watt small unit that CLINCHES THE SALE when SPEED is the final consideration!
Used one or more to the range, the CHROMALOX ROCKET is the final answer to the prospect who may still think electric cooking is slow—because the ROCKET gives the FASTEST COOKING MONEY CAN BUY!

In a nutshell the ROCKET offers your electric range customers:

- **OVERALL SPEED** that's unequalled by any competitor!
- **SEPARATELY CONTROLLED** *INNER COIL "HOT-SPOT"* 850 watts for fast, cool cooking in small utensils and percolators saves up to 45% of current costs

Nothing developed in recent years matches these big, honest-to-goodness sales advantages for electric ranges equipped with the CHROMALOX ROCKET!

SPEED THAT TOPS ANY COMPETITION

Here's why—

Laboratory tests show that the Rocket boils a pint of tap water in 3 minutes. That's speed beyond any competition.

Unit lifts up, only one part to remove for thorough washing. Tubes are made with Inconel for extra durability and strength.

Inner coil, 850-watt "Hot-Spot" for super high speed cooking plus economy that can't be beat.

AVAILABLE FOR REPLACEMENT, TOO

Part No. AT-626, 236 volts only—can be used with any Chromalox size 6 adapter ring

SEND FOR ROCKET LITERATURE which gives the complete details on this NEW and different Range Unit.

CHROMALOX
ROCKET

Look for the golden medallion ——►

EDWIN L. WIEGAND COMPANY, 7600 THOMAS BLVD., PITTSBURGH 8, PA.

C. B. Rogers, 1000 Peachtree St., N. E., **Atlanta, Ga.**; L. R. Ward Co., 2201 Commerce St., **Dallas 1, Texas**; 932 M & M Bldg., **Houston 2, Texas**; 2500 Louisiana St., **New Orleans 15, La.**; 1519 So. Boston St., **Tulsa 5, Okla.**; W. R. Phillips, P. O. Box 2561, **Raleigh, N. C.**; W. R. Phillips, Jr., 3125 Lamb Ave., **Richmond 22, Va.**

RC-44

2032—Electric and Gas Water Heaters. Four-page illustrated folders explain outstanding features of Fowler water heaters including porcelain lining, "black heat" elements, and 3-way insulation. These folders list specifications, dimensions, and construction details, and are available from Fowler Manufacturing Company, 2545 S. E. Gladstone St., Portland 2, Ore.

2034—Electric Flat Irons. Full information on American Beauty Electric Flat Irons in a weight, a shape, a size for household, as well as every industrial and manufacturing use, is available in literature from the American Electrical Heater Company, Detroit 2, Mich.

2036—Fans. Colorful literature describing the new spring-suspended silent window ventilating fans and table air circulators to be featured in 1950 are now available from the Fan Division, International Oil Burner Co., 3502 Park Ave., St. Louis, Mo.

2038—Murray Ventilating Fans. A set of specification sheets is available describing the Murray line of fans, including 20 and 24 inch window fans and vertical and horizontal ventilating fans. H. C. Biglin Co., Inc., 177 Harris St., NW., Atlanta 3, Ga., is exclusive sales agent for the line which is manufactured by Murray Co. of Texas, Inc.

2040—Electric Blowers and Exhausters. Bulletin 3014-D describes Types "E" and "RE" Buffalo blowers and exhausters manufactured by Buffalo Forge Co., Buffalo 7, N. Y. Characteristics of the blowers, graphs, charts including capacities and static pressures, and exact dimensions are all contained in the 8-page folder.

2042—Window Fans. Meter Electric & Machine Co., Inc., 3323 E. Washington St., Indianapolis 7, Ind., have available the following catalog sheets: Form 2207, which describes and illustrates each of their five Nu-air Windofans; Form 2208, describing and illustrating three three-blade and one four-blade Nu-air Quiet Propellers; and Form 2209, which illustrates the Nu-air Windofan No. RW-240 or RW-260.

2044—Fan Units. G-M Laboratories, Inc., 4500 N. Knox Ave., Chicago 41, Ill., have released catalog pages of description on each of the four fan and fan and heater units currently in their line. Informative and well illustrated, these pages list the sizes, characteristics, prices, etc., of each model.

2046—Household Electrical Appliances. Dominion Electric Corp., Mansfield, Ohio, offers catalog information and detailed specifications on a complete line of table appliances, called "Family Favorites."

2048—Room and Water Heaters. Wesix Electric Heater Co., 590 First St., San Francisco 5, Calif., offers an 8-page illustrated catalog describing Wesix products for home, office and industry.

2050—Cooling and Ventilating Equipment. Complete data are available on Chill-Air window fans and coolers for home, theatre and store, recirculating pumps and blowers. Write National Engineering and Manufacturing Co., 525 Wyandotte, Kansas City, Mo.

2052—Portable Circulating Heater. A catalog sheet describing 1320 or 1600 watt portable circulating heaters, featuring cool case and room-wide heat penetration, is available from the Titan Mfg. Co., Inc., 290 Terrace, Buffalo 2, N. Y.

2054—Fans. The C. & H. Air Conditioning Fan Co., Inc., 1591-1621 DeKalb Avenue N. E., Atlanta 6, Ga., have released an interesting 28-page booklet, "Cottingham's Supreme Quality Fans." Besides showing pictures of various models, views of operations inside the plant, and specifications, there is a section devoted to methods of installation of attic fans.

2056—Radiant Heaters. Edwin L. Wiegand Co., 7500 Thomas Blvd., Pittsburgh 8, Pa., has prepared a portfolio of Chromolox Radiant Heater Application Reports. In addition, the portfolio includes catalog sheets and technical data on the Chromolox "RAD" heaters.

2058—Exhaust Fans. A new Emerson-Electric Exhaust Fan catalog, illustrating and describing a dated fan line of fans for all types of buildings, is offered by the Emerson Electric Mfg. Co., St. Louis 21, Mo.

2060—Propeller Fans. The Herman Nelson Corp., Moline, Ill., announces its new Bulletin 5141 containing 12 pages of technical information and concise details about direct and belt drive propeller fans as well as practical, proven unit fans.

2062—Hot Water Heater. Informative and well illustrated data are available from Bell Electric Products Co., 700 Murphy Ave., SW., Atlanta, Ga., on their Tabletop Electric Water Heaters. These units are available in single and double elements with a thirty gallon capacity.

2064—Electric Fans. An attractive, 8-page, 62nd Season Catalog of Zephair fans has been made available by the Hunter Fan & Ventilating Co., P. O. Box 2858, Memphis 2, Tenn. A comprehensive description of this company's products is given, with complete specifications and dimensions.

2066—Shutters & Dampers. A 12-page catalog (No. 46) is available from the Elgin Shutter Mfg. Co., 2738 W. Warren Ave., Detroit 8, Mich., describing the 17 different types of shutter and dampers manufactured by them, and as used in connection with ventilating and air-conditioning installations.

2068—Air Circulator. An illustrated catalog page (Form 23037), 8½ x 11 inches in two colors, gives complete specifications and performance characteristics of the GM-000 24-inch Oscillating 3-Speed Air Circulator. A special 8½ x 11 page of diagrams shows operation of the safety release on the oscillating mechanism. A short comparison of this model with other well-known makes. Also glossy 8 x 10 photographs of separate wall, floor and counter models are available from G-M Laboratories, Inc., 4328 N. Knox Ave., Chicago 41, Ill.

2070—Zephair Fans. Hunter Fan and Ventilating Co., Inc., 400 So. Front St., Memphis, Tenn., offers a new 8-page catalog containing detailed information on the Hunter Zephair Fans for home and industry.

2072—Reed Unit-Fans. A new 16-page booklet on unit-fans has been published by Reed Unit-Fans, Inc., 1001 St. Charles Ave., New Orleans 8, La. This booklet describes the design of the Reed reversible unit-fan and how by adding various attachments it serves all purposes and uses.

2074—Ventilating Fans. The complete line of C. & H. ventilating fans is pictured, with dimensions and details, in a new 24-page catalog. Described are exhaust fans, window fans, air circulators, portable and desk fans, and fan accessories such as grilles and shutters. C. & H. Air Conditioning Fan Co., Inc., 1667 DeKalb Ave., NE., Atlanta, Ga.

2076—Coffee Makers. The complete line of Cory coffee products, including the famous Cory rubberless coffee brewers, service set, the Cory Automatic, electric coffee grinder, 2-heat electric stove, and commercial units is described in a 20-page, beautifully illustrated booklet. Copies may be obtained from the Cory Corp., 221 N. La Salle St., Chicago, Ill.

2078—Sales Helps. A variety of sales helps, including Sound Slide Colored Training Films, How to Sell Booklets, Consumer Pieces, Specification Sheets, Demonstration Kits, Display Cards and Promotion Kits for selling and demonstrating General Mills Home Appliances: Pressure Quick Saucepan, Tru-Heat Iron and Steam Ironing Attachments are available to dealers from General Mills, Inc., Home Appliance Dept., 1620 Central Ave., Minneapolis 13, Minn.

2080—Water Heaters. Information is available about the "SEPCO" Electric Water Heater from the Automatic Electric Heater Co., Pottstown, Pa. Literature available describes several exclusive features in the "SEPCO" line of round and table top heaters.

2082—Fans. Catalogs Nos. 863 and 864, just issued by Chelsea Fan & Blower Co., Inc., 1206 Grove St., Irvington 11, N. J., include descriptive copy, specifications, dimensions, photographs, etc., of a full line of fans for residential, commercial, and industrial uses. These catalogs include information on 17 types of ventilating and comfort cooling equipment varying in sizes from 12 inches to 60 inches, and in output from 1,000 c.f.m. to 42,000 c.f.m.

2084—Lakewood Fans. Ventilating fans, spray booth fans, window ventilators, shutters, and replacement parts for all units are described in a catalog available from Lakewood Engineering & Manufacturing Co., 1750 W. Lake St., Chicago 12, Ill.

2086—Monarch Electric Ranges. Data is available from Malleable Iron Range Co., 4861 Lake St., Beaver Dam, Wis., on all types of this company's ranges.

THIS IS THE ONE YOU HAVE BEEN WAITING FOR!

BIG DIVIDEND SALE ON Westinghouse ELECTRIC HOUSEWARES

In addition to nation-wide advertising, Westinghouse supplies a big FREE DISPLAY PACKAGE to make 'em *stop, look* and *buy* . . . plus suggestions for smart, sharp displays.

HERE THEY ARE . . . SIX tempting Westinghouse combination bargains to boost your sales for a full 2-month period. You make full profit on the Westinghouse Roaster, Food Mixer, Waffle Baker, Sandwich Grills and Streamliner Iron which are sold in combination with these dividends: the Electric Griddle, the 2-cup Electric Percolator, the Waffle Grids and a Hot-Iron Holder. You can stock up heavily because every dividend can be sold at regular prices after they have been used to boost your seasonal sales. This means EXTRA PROFITS for you.

RESERVE YOUR SHARE OF THESE BARGAINS.

FREE DISPLAY PACKAGE (AP-8702) INCLUDES

- 6—Easel Cards
- 1—Window Banner
- 1—Key City Ad Blowup
- 6—Window Spots
- 1—Key City Ad Reprint
- 1—Display-Ad Suggestion Sheet

Limited Quantity . . . Put in Your Order Now

WESTINGHOUSE ELECTRIC CORPORATION
Appliance Division • Mansfield, Ohio

See T-V's Top Dramatic Show . . . "STUDIO ONE". . . . Every Week

LOOK AT THESE BARGAINS

DIVIDEND 1 ROASTER-OVEN, reg. $39.95 ELECTRIC GRIDDLE, reg. $14.95	BOTH FOR $44.95 SAVE $9.95
DIVIDEND 2 FOOD MIXER AND JUICER, reg. $39.95 ELECTRIC GRIDDLE, reg. $14.95	BOTH FOR $44.95 SAVE $9.95
DIVIDEND 3 AUTOMATIC SANDWICH GRILL, reg. $17.95 WAFFLE GRIDS FOR GRILL, reg. $2.95	BOTH FOR $17.95 SAVE $2.95
DIVIDEND 4 STANDARD SANDWICH GRILL, reg. $14.95 WAFFLE GRIDS FOR GRILL, reg. $2.95	BOTH FOR $14.95 SAVE $2.95
DIVIDEND 5 WAFFLE BAKER, reg. $16.95 2-CUP ELECTRIC PERCOLATOR, reg. $3.95	BOTH FOR $16.95 SAVE $3.95
DIVIDEND 6 STREAMLINER IRON, reg. $12.95 WIL-STAN HOT-IRON HOLDER, reg. $1.98	BOTH FOR $12.95 SAVE $1.98

YOU CAN BE SURE..IF IT'S Westinghouse

FAN PROMOTION

by Beatrice Miller

. . Beat hot weather to the punch with direct mail, newspaper, television

During the first week of April over $5,000 worth of fans were unloaded and placed in the stockrooms of General Electronics Sales and Service, Washington, D. C., in anticipation of a boom business to exceed last year's huge fan sale. Simultaneously, a fan promotion campaign budgeted at 3½ per cent of the anticipated gross fan sale was undertaken that will exceed last year's in scope.

"This year we are going to get started well ahead of the first hot spell," said James H. Crawford, one of the partners of General Electronics Sales and Service, who has lined up two local and two suburban newspapers, a postcard and letter system for direct mail, and for the first time will use television in their promotional fan campaign. "We are not going to wait for the hot weather to sell our fans."

Taking a mailing list of about 4,000 which includes old customers, a cross-cross directory of the neighborhood, and accounts receivable, Crawford prepares a letter reminding the customer that the hot weather will soon be with us, that for comfort and more efficient functioning fans are an essential. A

(Above) H. L. Knoppel, sales manager of General Electronics, Washington, D. C., instructs one of his salesmen on explaining the differences between a circulating and exhaust fan to a customer. Often this discussion influences the customer to consider the best product for his needs. (Below) "We never try to oversell," stressed Knoppel, who believes that overselling leads to dissatisfaction and returned merchandise, "but try to present as full a picture as possible."

coupon enclosed in the letter may be returned requesting a representative to call to discuss the conditions needed for cooling a home, an office or a store. People are invited to telephone or write in.

Last year General Electronics addressed themselves to specific groups as well as to their large general mailing list. One group included doctors, attorneys and dentists. Here the promotion recommended that they need it to their patronage and to themselves to work under the most favorable conditions obtainable. A representative would be glad to call on them to survey their needs, discuss relative advantages of the various types of fans, structural differences and costs. It was suggested that literature was available to precede or supplement the salesman's call. Letters were also sent out to stores and shops recommending a cooling system that would make their clientele more comfortable and more relaxed during shopping tours.

Follow-up Letter

Crawford estimates the first letter brought about a 3 to 4 per cent response. Some called in, some wrote in. About a month later a follow-up letter was sent out which was worded to the effect that hot weather was now here, that Washington was a very uncomfortable place in the summer, and that the benefits of having some means of cooling would make living more tolerable.

A representative from General Electronics approaching a prospect does not try to sell the product but the need. H. L. Knuppel, sales manager, emphasized. He has instructed the salesmen to act uncomfortable but ask permission to remove their coats, mop their foreheads as they stress need rather than product. Where a prospect is definitely interested in an exhaust fan, measurements are taken of the bedroom area of the second floor or a house, the volume determined in cubic footage, and with a south, southeast, or north exposure in mind, the necessary change of air is estimated and the capacity fan required to do the job.

The difference between the circulating fan and exhaust fan are explained to a customer and it is frequently possible to change the customer from the purchase of a $15-$30 fan under consideration to an $85 fan. The salesman points out that a circulating fan agitates the air in the room where, as an exhaust fan removes the hot air by having it sucked out. The accumulated hot air under the ceiling is removed by an exhaust fan and replaced with fresh cool air from other sources. He explains that while the air outside becomes cooled after the sun goes down, house walls and air layers remain hot and it is an exhaust fan bringing in the cool air that will make sleeping possible.

Overselling Discouraged

"We try never to oversell," stated Knuppel, who believes that overselling leads to customer dissatisfaction and returned merchandise, "but try to present as full a picture as possible."

He pointed out to the customer that for the cash payment of $64.95 on a circulating fan, the customer could use that amount as a down payment on a much better job fit and have the lasting satisfaction of an exhaust fan for small amounts per month.

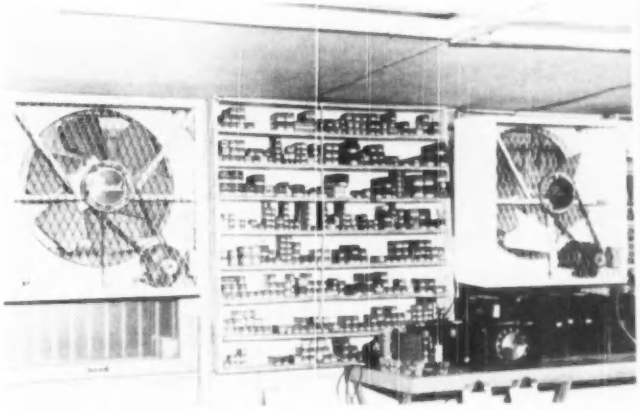
The sales staff also uses a map in their promotion. Where a sale has been made, salesmen leave their cards and suggest that if friends drop in for a pleasantly cool evening of television or canasta, that they give out their cards for information on how to obtain similarly cool living quarters. Sometimes a small gift is made to the customer whose suggestion has brought about another sale, but frequently the pleasure of having helped out a friend brings enough satisfaction, and customers or "users" refuse the gift.

General Electronics also puts a small gummed label in compartments on the fan so that there will be no difficulty in calling where the fan was purchased and who sold it. It is called to the customer's attention as a reminder where she may obtain service on the unit whenever the need arises.

Selling air conditioning units Knuppel finds, presents no sales. A wistful thinking customer calling in a representative on air conditioning may discover she does not want to go to the expense of $400 for cooling only one room but will find the outlay of approximately $100 for partial conditioning suited to her budget.

Though they have done some commercial cooling, it has not been extensive. Many of the neighborhood shops like restaurants and beauty or barber where the heat is excessive require conditioning beyond that which the exhaust fan can provide. And many of these shops are fly-by-night affairs that have not been good credit risks.

Prospective fan customers seldom



This commercial installation of two large window fans was done in a neighborhood radio and television repair shop by General Electronics. The hot air is sucked out and replaced by cool air from other sources.

raise the question of cost of operation, once comfort is injected in their minds. But generally, for Washington, it is presented as coming to about 50 cents a month.

Service Guarantee

One year of service is guaranteed by General Electronics on units sold.

To those who have not responded to direct mail, a third letter goes out several weeks after the second with the same appeals restated.

Parallel with the direct mail campaign two local newspapers—the *Washington Star* and *Washington Post*, last year kept before the public, five times a week advertisements

Continued on page 1021

INSTALLATION PRACTICE

An ES MERCHANDISING Survey

Contracting of appliance installation is favored

APPLIANCE DEALERS for the most part realize that their customers are buying the utility and conveniences offered by electrical household appliances rather than the "things themselves," and consequently find it necessary to sell appliances on an installed basis.

A survey of appliance dealer practices in this respect indicates that there is a considerable difference of opinion among dealers as to the advantages of contracting for appliance installation rather than maintaining their own installation crews.

In a recently completed survey that covered a sizeable number of appliance dealers in various classifications, large and small towns, and having a wide range of annual sales volumes, it was learned that dealers in smaller communities made their own installations in a larger number of instances than did large city dealers.

In the case of electrical appliances requiring installation, such as ranges, dealers in towns under 10,000 population lined up as follows:

Use Own Crews	47%
Arrange with Contractor	42%
Let Buyer Install	11%

In cities above 10,000 population, dealer practices in the case of electrical appliances requiring installation were as follows:

Use Own Crews	21%
Arrange with Contractor	64%
Let Buyer Install	15%

With respect to household appliances requiring piping connections such as water heaters, dishwashers, etc., the dealer practices followed the same pattern. In towns under 10,000, dealers reported as follows:

Use Own Crews	42%
Arrange with Plumber	43%
Let Buyer Install	15%

The corresponding percentages for dealers in cities above 10,000 population were:

Use Own Crews	23%
Arrange with Plumber	57%
Let Buyer Install	17%

There are, perhaps, two explanations for the larger number of dealers in smaller towns who have their own men for making electrical and plumbing connections for appliances sold. On the one hand, the smaller communities will generally be less exacting in the matter of licensing for electrical work and plumbing, and dealers are more likely to find it possible to employ a good all-around mechanic or two capable of making both electrical and piping connections. In the larger cities, it would generally be necessary for an appliance dealer to be licensed both as a master electrician and as a master plumber in order to make such installations. Rarely would the same service man be able to handle both types of work. Volume would have to be considerable in order to justify both electrical and plumbing crews.

The second explanation for the larger number of small town dealers making their own electrical and piping installations may be found in the fact that small town dealers in general appear to be more conscious of the need for rendering complete service to their customers. With a larger percentage of their business from rural and farm customers, they soon learn the weight which these customers give to a good service organization in making their buying decisions.

Effect of Volume

As would be expected, the appliance sales volume of a dealer has some effect on his decision as to how installations should be handled. Those reporting large annual sales volumes report the highest percentage of dealer-operated installation crews. With a $50,000 sales volume as the dividing line, the dealer practices with respect to appliance installations as reported in the recent survey were as follows:

Under $50,000 Volume

Electrical	
Use Own Crews	34%
Arrange with Contractor	45%
Let Buyer Install	21%
Plumbing	
Use Own Crews	34%
Arrange with Plumber	42%
Let Buyer Install	24%

Over $50,000 Volume

Electrical	
Use Own Crews	42%
Arrange with Contractor	52%
Let Buyer Install	6%
Plumbing	
Use Own Crews	42%
Arrange with Plumber	48%
Let Buyer Install	10%

The type of business with which an appliance dealership may be associated appeared to have little influence on the method of handling installations, except that in every case electrical contractor dealers made their own electrical installations for appliances sold, and plumbing companies operating an electrical appliance department made their own plumbing connections for appliances sold.

In the case of independent appliance dealers, department stores, furniture stores, hardware stores, building supply dealers and other types of merchandising organizations operating electrical appliance departments, there was no common pattern for handling installations.

In commenting upon the installation problem, dealers complained in numerous instances that plumbers did not cooperate fully where contracting with plumbers to make installations of appliances sold; they referred frequently to the fact that arrangements were not satisfactory, but that they had not been able to find a better arrangement.

The attitude of appliance dealers in the matter of appliance installations was influenced to some extent by the practices of the local electric utility company with respect to installation of certain load building appliances.

Utility Wiring Subsidies

Here are a few of the wiring subsidy practices of electric utilities:

One company pays all wiring costs on ranges and water heaters and moves them once, without cost, charges $20 per move thereafter.

Another company pays $35 for range and $22.50 for water heater wiring.

Numerous companies pay a portion of wiring costs for ranges and water heaters, the average payment running about $25 for ranges and $10 for water heaters.

Many companies, probably more

(Continued on page 104)

T-V IN PROMOTIONS

Department store advertising favors original slant over giveaways . .

by Lawrence H. Bugg

"WONDERFUL prizes! Grand entertainment! See an actual WAFM television broadcast! See yourself and friends on television! See Alabama's first jewelry fashion show! Come early! Bring the whole family! 6:30 to 9:00 p.m."

Thus, in a full-page newspaper ad vertisement, Bromberg's of Birmingham heralded their television party and open house held recently. The entire open house program was televised, and it is estimated that thousands of people throughout Alabama viewed the show. Du Mont's "Telecouncil" and staff made it possible for guests to view themselves and friends on television.

Television Boom

Harold E. Thomas, advertising manager, said he felt the event was quite successful, and together with the fact that the coaxial cable from New York is due to reach Birmingham in September of this year, the store anticipates a boom in the sale of television sets.

John L. Bumpus, the appliance section's resourceful manager, is always on the lookout for better ways to promote appliances. When the new million dollar store opened in 1946, Mr. Bumpus was able to acquire a quantity of small radios which were scarce at the time. Advertising the radio for $5.00, or below cost, he was able to draw such a crowd to the appliance department that it was necessary to station policemen to maintain order.

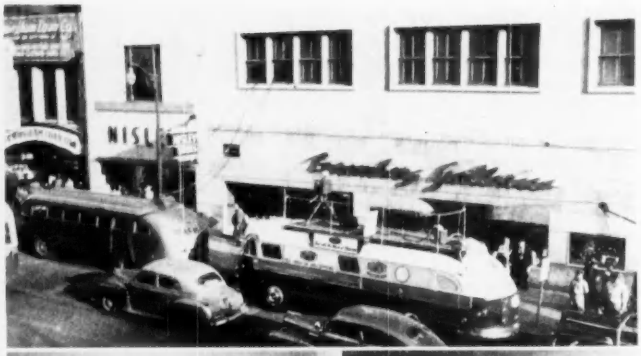
The 250 sets which Mr. Bumpus had on hand were sold in 30 minutes, but crowds streamed through the colorful and modern appliance center all day, as Mr. Bumpus had anticipated. It was an inexpensive way of presenting the appliance department to Birmingham.

In introducing a new type of vacuum cleaner, Mr. Bumpus amazed and fascinated passers-by through use of a novel window display. A sweeper was suspended from the top of a window and turned on. The force of suction and the pull of gravity being about equal, a light bulb remained suspended in the window in mid-air.

Window and interior displays, newspaper advertising, and radio and television advertising are teamed to do a thorough selling job, and all advertising concerning the appliance department is correlated with that of the rest of the store.

Radio advertising includes "Concert Hall," a show offering recorded selections of famous musical personalities—such as Nelson Eddy, Lily Pons, or Richard Crooks—in addition to an assortment of semi-classical and operatic melodies. This Sunday afternoon

This full-page ad in the *Birmingham News-Age-Herald* was one of several inserted by Bromberg's, appliance department, in Birmingham, Ala., recently. The event being publicized in the ads was their television party and open house, and the entire open house was televised, along with a jewelry fashion show.



ermson program stresses the appliance department once every six weeks.

To maintain interest in Bromberg's as the television center of Birmingham, the popular dramatic television show, "Studio One," prepared by an appliance manufacturer, has Bromberg's as its local sponsor.

Newspaper ads promote appliances at least once a week, and they are advertised in the newspaper separately, in accordance with the store's policy. Special copy and engravings produced by Bromberg's are generally used in place of manufacturers' prepared copy and mats to enable the store to communicate with customers in its own distinctive way. The phrase, "The South's most beautiful appliance center," is often used in connection with a photograph of the department.

Mr. Bumpus arranges to have advertising stuffers accompany statements to charge customers. Also, an imprinted reminder of values in the appliance department appears on the back of return envelopes enclosed for customers' convenience in paying bills.

After an appliance has been featured in an advertisement, Mr. Bumpus follows through by prominently displaying the article in one of their windows and also in the store—"a customer must not be distracted," says Mr. Bumpus.

Bromberg's advertising costs amount to about 3 per cent of sales, or 5 per cent of sales when suspen-

(Continued on page 102)

(Left, above) Du Mont's "Telecruiser" and staff, along with WAFM-TV, made it possible for guests at the Bromberg open house to view themselves and friends on television. (Left, below) "Alabama's first jewelry fashion show," as it was advertised, in conjunction with the open house, drew a large crowd to the television auditorium of the store.

(Right, above) Small appliances are displayed in the open on shelves and counters, such as this fan and vacuum cleaner display. Interior displays are teamed with advertising to do a thorough job. (Below) This view of the fifth floor appliance center can be seen from the elevators. After an appliance has been featured in an advertisement, John Bumpus, manager, follows through by prominently displaying the article in one of the windows and also in the store, such as this island radio display in the center.

ATTRACTING SALESMEN

. . New appliance salesmen recognize value of service policy

by Baron Creager

A GREAT MAJORITY of the 25 salesmen employed by W. Pat Crow, Inc., appliance dealer of Fort Worth, Texas, are there because of a universally recognized and applauded reputation of the institution for wearing what it sells.

That, at least, is the conclusion of Bob Oliver, general sales manager, who, in 1949, led the two Crow stores and their 25 salesmen to a volume nearly double that of 1948.

Oliver concedes that such performance required an aggressive, hard-hitting organization such as he commands. And he admits that gathering such a sales force under prevailing circumstances is not ordinarily easy. He adds:

"However, most of our salesmen are men who came to us, some of them from other sales organizations, and sought to make a connection. When I got to the bottom of their reasons for wanting to work for the Crow Company, I found that our service policy had sold them on the organization."

No Previous Experience

"A good many men in the present force had no previous appliance selling experience. I would say that almost 80 per cent of them were inexperienced in appliance selling. But even inexperienced men had heard of the Crow reputation for service and recognized the value of such a policy. Naturally, they had investigated the field and were smart enough to know that satisfied users—which means well-serviced users—produce the most prospects and the most sales."

Inexperienced men were trained, Oliver says modestly, through the generous assistance of manufacturers and distributors. But even with training the salesman needs prospects and most productive prospects originate with users. Salesmen who wanted to catch on at Crow's seemed to know, says Oliver, that Crow users made a lot of sales for Crow salesmen.

"Why, everybody in Fort Worth knows about Pat Crow," said Oliver. "He was working in the appliance field when our principal product first came on the market, and he was in business in 1921. He didn't open a store in Fort Worth until 1932, but since then Pat Crow has become a sort of legend around here, especially for his service department.

"To our knowledge the Crow company was the only organization in Fort Worth that continued to make refrigeration service available right on through the late war. We are out of the commercial business, but during the war the service was both commercial and domestic. It's pretty hard to make people forget a service like that.

"So our salesmen are coming in on the Crow legend with most of their sales made through users who applaud the Crow service policy to friends. Salesmen get only about a day and a half on the floor each week. The rest of the time they are working with service-satisfied users and seldom have to resort to cold canvass."

So important is service considered as part of the organization at Crow's—over the formal and service policy—that the department grows whenever necessary. Presently, more than 20 persons are employed in that one department. There are 15 trucks, including delivery vehicles. Five outside mechanics do nothing but household service. Four are in the shop, and one man's entire time is required in the parts department. Two additional servicemen devote their time to floor furnaces.

Contests Stimulate

Meanwhile, the sales force is kept in high gear through the stimulant of a contest of one type or another, with some competitive inspiration in effect constantly. In December, a two-months contest was to close with awards of both clothing and bonuses, amounts of annual bonuses to be determined by volume rating in the contest.

"Our men are all aggressive, having been selected for that quality, and they like contests," said Oliver.

"Character of the prizes awarded is practically immaterial. They simply don't like to lose, so, being that type of men, they go out and hit the ball to win, whatever the prize may be.

"Generally, the prizes involve clothing. Our men are also the type who like to dress well. They realize that a neat and well, but not overdressed, appearance is in their favor. So they heartily approve of the idea of clothing for prizes.

"Oliver says his 25 salesmen averaged a net income of $800 a month during 1949, with some who made $600 a month and some who earned less. The title of commissions is 5 per cent on refrigeration and 10 per cent on all other major appliances. Average age is 30 years, but one salesman 67 years old is still a star producer, as is one of the youngest at 23.

Daily Sales Meeting

A daily sales meeting at Crow's starts at 8 o'clock every morning and the fundamental reason for calling the meeting at that hour, says Oliver, is to be sure that the sales force is out of bed and on the job. Tardiness is penalized by the popular custom of spinning a wheel to determine how much the late salesman must contribute to the "kitty." Sometimes a factory man is on hand and always the roll is called and on roll call each salesman reports the total of his sales for the previous day.

"It's a happy, prosperous sales force," says Oliver, "and all of them are producers. And I repeat, the reason we have this type of force is because of the service department, which has created and accumulated so much good will. The value of such a service department is demonstrated by the fact that salesmen recognize in it the benefits to salesmen.

"We haven't run an advertisement asking for salesmen since the spring of 1948. Our salesmen are men who voluntarily came to us or were brought in by other salesmen.

"With a service department such as the Crow company maintains, a good salesman sell sell another good salesman on the organization."

RENTAL CHECK LIST

Checking your own rental operations with answers to these 24 questions will point the way to more profit and fewer losses from this business in a retail electrical appliance store. Considering each of these points will help all dealers clearly define a policy so that everyone connected with the rental operation will realize the full extent of its profit possibilities.

by J. E. Bedford

DEMONSTRATING MERCHANDISE is one of the best ways to sell big ticket appliance items. Home demonstrations are best for most electrical appliances, and, as dealers know, selling a home demonstration is not the easiest selling assignment there is.

Yet, unless the customer can be induced to try out the electrical appliance in her home, the chances of making a sale are mighty slim. Many people won't have a home demonstration, even though they would like to see the equipment in operation, because they feel obligated to buy.

In other cases the selling job is more difficult after an appliance has been in a home for a week on a free demonstration. When this happens the customer has been busy developing all manner of objections to the appliance. She has been busy finding fault and possible weak points rather than selling herself on the time and money saving features of the electrical equipment.

This is a typical selling problem many appliance dealers face every day. It is discouraging to say the least. Yet, there is a way to handle this that will make more sales, and at the same time produce some extra income for the appliance dealer.

How? By twisting the approach around and charging customers for the home demonstration!

People know they don't get something for nothing, even though they would like to believe they could. When they are offered a free home demonstration, the average home owner knows there are some strings attached. These people hesitate to accept a demonstration because they feel they will be under some obligation to the dealer who furnished the equipment.

On the other hand, when these people rent a home appliance, they haven't shown any interest in buying. They want to use the equipment and are willing to pay a fair rental fee for the use of the appliance. Without the sense of obligation to the dealer, they use it and are quick to realize its many good features.

Since the customer is not examining, for instance, the refrigerator with a critical eye, she will sell herself on the benefits it offers. This was the customer doesn't develop a backlog of objections because she isn't thinking of buying—she is just renting.

Good Selling Strategy

This selling strategy helps appliance dealers make more sales, because after enjoying the benefits of an electrical appliance, the customer wants one

(Continued on page 102)

1. Is the electrical equipment being rented the best that the market affords?

2. Is the equipment a good advertisement for your appliance store? Are you proud of it?

3. Is the equipment sturdy enough to stand up under the tough usage it will receive from renters?

4. Are your rental rates fair and profitable?

5. Are the rental rates based on local competition and the prices they charge for renting electrical equipment?

6. In establishing the rates have all costs of operation been considered? Life of the appliances being rented? Repairs that may be necessary? Limited amount of seasonal use?

7. Is the advertising program promoting rentals constant—not conducted in a hit-or-miss fashion?

8. Do your promotions for appliance rentals come during the season when there is usually the most demand?

9. Have you done any direct mail promotional work in rural areas where renting is possible?

10. Is your appliance store listed in the classified section of the telephone directory under rentals?

11. Do you have a regular lease agreement that all appliance renters must sign when they accept the rental equipment?

12. Do you obtain complete information about the customer renting the electrical equipment? Name? Address? Telephone number?

13. Do you have some good system to identify all customers renting home appliances?

14. Does the rental agreement properly identify the electrical equipment being rented with serial numbers, make, and model?

15. Is some provision made for the placement of responsibility in case of damage to the equipment?

16. Does the agreement clear you from any possible claims for personal injury?

17. Is the time the rental starts clearly shown on the lease agreement?

18. Are special assessments for damages to the equipment clearly stated in the lease agreement?

19. What about the deposit requirement? Is it clearly shown on the lease agreement if one is charged?

20. Is some plan in operation to keep all rental equipment in tip-top shape for renting?

21. Do you provide the latest equipment instead of out-dated home appliances that can't be sold and aren't good advertisements for the store?

22. Do you have a wide variety of home appliances for renting purposes?

23. Do you follow up customers who rent home appliances to sell them new equipment?

24. Do you suggest the purchase of new equipment when the rented equipment is returned?

SALES FROM RENTALS

Customer use of appliance beats demonstrations and talk . .

by S. A. Maxwell

"ACTUAL USE of appliances by customers rather than a lot of talk about them has been our key to sales," declares Mrs. Elizabeth Staggs of Electric Homes, Inc., Birmingham, Alabama. Mrs. Staggs is associated in the business with her husband, Arthur Staggs, who is joint owner with John Tom Balham.

"In fact you can talk all day and still not get the results obtainable in a few minutes of operation," Mrs. Staggs states. "In line with this policy we are renting an iron to prospective customers at the rate of 50 cents a day or $3.00 a week. As it is collapsible, this is a convenient item to place in the home and even in small apartments. Another feature that makes it well adapted for renting is that it cannot be damaged. With a clean cover, the iron after rental is as new as ever and again ready for use.

"But, of course, the primary object of rentals is to make sales, and the ease and convenience of operation of the iron results in many instances in purchases by the people to whom we rent. In the case of an appliance, I think, is education as to its more important than in that of the iron. Of course, we rent only to persons of approved credit rating.

Approval Plan

"Another plan we used to excellent advantage the last summer was to install window fans on approval over the week end in homes, apartments, and stuffy places. We made sure always that it was a hot week end so that the prospect would be loath to have the fan taken out. By this method we sold hot season 36 fans priced at $119.95 each. Our policy in the first place is always to install the biggest fans. You get the best results this way and have a better chance of selling the window fan idea even if later the prospect decides to buy a smaller fan.

"Our project in selling the washer and dryer is somewhat different. We invite prospects to bring in their clothes for us to wash and during the process I give a talk — explain the operation in detail. When it comes to the drying, however, I urge the visitor not to wait but go out to do her shopping or other errands. I will have the clothes ready for her later, or better still bring them home to her day. That would give us an entree to the home.

"The entire process requires about an hour and a half. That, of course, would be much too long a time to me to talk and besides wear the prospect. Then, too, there's the possibility of getting into the home which is an important step toward a sale.

"The fact that we had close to 600 demonstrations on vacuum cleaners in rounds, I believe, for the fact that while back our vacuum cleaner sales somewhat off. Now, however, with the help of a free sample of a window cleaner we have devised a selling idea which has worked wonders in stepping up sales on the vacuum cleaner. One salesman takes the sample of window cleaner with him in a car for demonstrations. He follows together with the vacuum cleaner. This does not, however, bring the vacuum cleaner with them up to the door, as we consider that the wrong approach, but leave it in sight in the car. However, the window cleaner has proved an effective "Open Sesame" and has resulted in demonstrations and sales of the vacuum cleaner.

Prospects Grateful

Of course, as happens, the housewife may already have a vacuum cleaner and there is no prospect of selling another at the moment. However, she is grateful for the window cleaner and the gift often results in somekind of sale. For instance, salesmen make a practice of carrying with them in the car light decks of cigarettes — a type of merchandise every

(Continued on page 101)

After reading the details of this rental operation plan, check the questions on the previous page to see how many this dealer could answer with a "yes." Then check your own operations with the same test, or, if you plan to enter the rental business, decide how many questions *need* to be answered in the affirmative and incorporated into your operations.

SELLING BY RADIO

by Robert A. Latimer

City-wide promotion triples store traffic, solves sales staff turnover problem . .

INVESTING APPROXIMATELY THE same amount of money which would normally be involved in operating a four-man crew of outside salesmen, in a "saturation" radio show instead, has worked out so well for Southern Electric Company, appliance dealership in Tallahassee, Fla., that the store sold a $225,000 volume during 1949—in a city of only 40,000 population.

Jack and Pincus Feinberg, heads of the firm, are veteran appliance dealers, having been in the Florida state capital since 1939. A few years ago they moved into one of the state's most modern appliance stores, one block off the main shopping street, which, with 10,000 square feet of space available, permitted the opportunity to expand every department into maximum efficiency.

Separate Departments

The big, beautifully decorated store with more than 50 feet of display frontage, incorporates separate departments for heating equipment, model kitchen, model laundry, radio department, small appliances, refrigerators, ranges, conventional washing machines, etc.—each department almost as large as the average specialty appliance store.

With light pastel colors on the walls, wall paper paneling over seat lounges and display rooms, etc., the store has been made one of the most pleasant possible spots to shop for major appliances.

The Feinberg brothers' guiding theme is reflected by a lucite plastic sign over the doorway which reads, "Enter With Confidence" on one side, and "Leave With Satisfaction" on the other.

Like most appliance retailers, however, the Florida brothers have been troubled with the salesman turnover problem ever since opening day. Intending to set up an outside sales crew of five or more men, the Feinbergs have found it difficult to maintain even a semblance of an efficient outside selling staff.

"Even though we have a top-notch nationally advertised line, plenty of diversified departments, and an excellent market, the tendency has been for salesmen to drift on," "Pinky" Feinberg indicated. "We have found it difficult to obtain experienced men of any sort, and have consequently run up against the problem of high expense in training salesmen only to find them resigning, a few months later on."

When a recapitulation of personnel expense proved that the salesman turnover was one of the worst profit leaks in the store, the brothers decided that something had to be done about it. "Instead of an expensive sales crew, we felt it might be possible to utilize the same funds for some type of effective, continuous promotion or advertising, which would achieve the same sales results," it was pointed out.

Problem Answered

All of these requirements have been answered in the novel "Quizz" radio broadcast, which Southern Electric Company has presented each Tuesday night for more than a year, direct from its handsome showroom. With a radio audience estimated at 10,000 or more listeners each Tuesday evening, Southern Electric Company has adapted the familiar game of Bingo to radio presentation. For skill on the listeners' part, the firm gives away huge groups of prizes, appealing jackpots, etc., and has built so much traffic that the store is constantly filled the week around.

Sales Increased

Before adopting this novelty radio show, the Feinberg brothers experimented with newspaper advertising, direct mail, contest winners, etc., and found a drawback of one type or other in each. However, when the Quizz game was developed, it was found that good will, store traffic, actual sales, etc., were all increased with practically no disadvantages.

Most important, we found that instead of sponsoring the show, paying for radio time, we were able to interest other retailers in non-allied lines in donating valuable prizes in return for radio mention," Pincus Feinberg reported. "In other words, we merely followed the steps laid down by the national network giveaway shows, by adapting it to our own local situation."

Thus, under the Quizz plan as it exists today, Tallahassee residents who are willing to drop by the store and pick up an entry blank may participate in "Quizz" each Tuesday night. On the list of prizes offered by an announcer, broadcasting from the center of the store, are many small elec-

Shown at left is part of the large "studio" audience in the showroom of Southern Electric Co., Tallahassee, Fla. A novelty radio quiz program, "Quizzo," similar to Bingo, but actually a game of skill, has been sponsored each Tuesday night by the appliance firm, with both radio and store audiences. (Right) Anyone who has a telephone and a radio can play the game. When a contestant believes he has the right answer, he phones it in to the announcer. Jack and Pincus Feinberg, heads of the firm, claim that store traffic has more than tripled due to the program.

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the appliance prizes donated by Southern Electric Company, as well as a dozen or more valuable prizes supplied by fellow advertisers.

Included are such items as 10 free grass jobs, a year's supply of ice cream, 12 mos. laundry, a shirt a month from a men's clothing store, 12 pairs of stockings, a free trip to Jacksonville with room and meals, luggage, jewelry, laundry service, and dozens of other prizes. All of these are donated by Southern Electric Company by the co-operating retailers, who are credited with the donation on the radio show, sure that their names will be carried to thousands of listeners.

In addition, a jackpot has been built up, which in each case, has been worth well over $1,000, by the time a winner has received it. During late February, for example, the second jackpot, following one which was won on February 3, was well above the $1,200 mark, according to Mr. Feinberg.

"The game is not a lottery in any sense of the word, and has full approval from the government," Mr. Feinberg indicated. "Under the plan, each customer who drops into the store receives a printed form, which resembles a Bingo card, with the exception that the 25 squares provided contain letters, which are fitted with word sentences given by the radio announcers.

How the Game is Played

The contestants listen for the questions through station WFAL, and draw a circle around the letter which is suggested by the question. In other words, the announcers use a series of questions, in which answers begin or capitalize with, e.g., B and I. The listener who correctly gets the answer and signals the right letter by telephoning in becomes a winner. All of the letters can be vocalized by telephone, and thus, anyone who has a telephone and a radio can play the game.

Typical questions are: "What is the longest river in the world?" with "Amazon" as correct the answer. Or: "What is the largest state east of the Mississippi?" with "Georgia" the answer in this case.

In addition to the large radio audience attracted each Tuesday night, Southern Electric Company invites a radio audience which brings more than 100 people into the store, to provide applause and active hustling interest to the show. "Quiz" is fun enough on such broadcast to play up

(Continued on page 100)

Southern Electric has 10,000 square feet of floor space with more than 50 feet of display frontage. Separate departments are incorporated for heating equipment, model kitchen, model laundry, radio department, small appliances, refrigerators, ranges, conventional washing machines, etc., and each department is almost as large as the average specialty appliance store. In the refrigerator display room, at the left of this picture, notice the photographs above each refrigerator showing four model kitchens. They were photographed from above to show as much of the kitchen as possible.

"If I prepared a profit and loss statement monthly, I'd spend all my time taking inventory," said James Wilson, electrical dealer. "I have enough trouble as it is taking inventory annually. I realize that a dealer is at a big advantage if he knows where he stands on loss or gain each month in these hectic times, but I must continue to speculate on this phase of management despite the consequences because of the difficulty and expense attending monthly inventory."

INVENTORIES SIMPLIFIED

. . Trend of profits shown without actual stock counts

by Arthur Roberts

We have heard the same thought expressed many times by dealers who pass up the advantage of preparing monthly profit and loss statements because they balk at the time and expense of taking monthly inventory. We agree, except in cases where the inventory items on hand are few or easily counted, that the taking of stock consumes a lot of time, a lot more time than the dealer can give to this important task every month, and it is necessary to get the inventory figure or provide a calculation for the physical count that will enable the dealer to arrive at a net profit with reasonable accuracy.

There is a way, however, to prepare a monthly profit and loss statement without taking inventory each month, and the method of calculation assures a result accurate enough to provide dependable analysis. This is the procedure:

Determine your cost of sales from suppliers' invoices—costs that may be planned on the sales slips which enter ing the transactions on the books. A sales slip of some kind should be made out for every order, cash or credit. This is essential to good accounting practice. When cash sales are rung up on the cash register, the dealer should make a notation on the tape, or, for abbreviation, use a code to designate the kind of goods sold. In preparing the profit and loss statement for September, for example, the dealer will average the sales and cost of sales for the preceding month, August, and the current month, September, and use the ratio of cost of sales to sales for the two months on the September statements. For example:

Sales for Months of Aug. and Sept.	$10,000
Cost of sales for Aug. and Sept.	6,000
Margin on Sales for Two Months	4,000
Margin on Sales in Percentage	40%

If September sales totaled $4,500, he will use the foregoing cost of sales ratio (60 per cent) to arrive at the margin of profit for the current month. For example:

Sales for Sept.	$4,500
Cost of Sales	2,700
Margin on Sales	1,800
Margin in Percentage	40%

The average calculation for the two months is progressive. In other words, for the October profit and loss statement, average the figures for the preceding month, September, and the current month, October, and so on, as the months roll by. By using the two-month averages in this way, the dealer minimizes extraordinary fluctuations in the cost of sales that may occur in any one month.

At the end of the year the dealer discards the average figures and arrives at his cost of sales by taking a physical count. For example:

The ending inventory in December is carried over as the beginning inventory for the next year. At the end of January, to determine monthly profit or loss, the dealer will use the ratio of cost of sales to sales shown on his annual statement (it would be 62 per cent on the basis of the foregoing figures). This ratio is used for the first month in the year because it is based on a physical count and therefore more accurate than an estimated average for two or more prior months.

In February, however, the dealer reverts to the average figure and uses the average cost of sales for January and February. And so on, until the next inventory count. This may be quarterly, semi-annually, or annually.

Incidentally, when the dealer takes a physical count, he should adjust his books to agree with it, upward or downward, providing he takes inventory at actual cost to him. It is unwise to increase the value of inventory because market prices have gone up. This inflates profits, increases tax expense, and if prices drop subsequently, you'll be out of luck.

On the other hand, the inventory count is sometimes in excess of the book figures because the dealer bought some stock and failed to record the purchase in the books. Usually this occurs with merchandise bought for cash from suppliers. In such a case, it is all right to increase the book figures on inventory when the physical count discloses that there is more in stock at cost prices than the books reveal.

Method Found Satisfactory

Dealers have asked us, "Is this method accurate enough to give a reliable profit and loss figure?" Our field studies indicate that in 20 per cent of the cases, there is about two per cent variation between the average method described here and the physical count. This will, of course, make a difference in the net shown on the profit and loss statement, more or less, but the result is near enough to accuracy to assure dependable analysis and disclose the trend of profits, which is an important factor in business management.

Sales		$60,000—100%
Inventory-beginning of year	$ 8,000	
Add purchases during year	40,000	
	$48,000	
Deduct inventory-end of year	10,800	
Cost of sales during year	$37,200	37,200— 62%
Margin on sales during year		$22,800— 38%

THE SOUTHERN MARKET

Present conditions point to excellent profit opportunities

by Fred J. Walters

Vice-President of Marketing
Hotpoint, Inc.

THE SOUTH has emerged as the fastest growing market for electric appliances in the postwar period, and at its present phenomenal rate of growth promises to rank high in the long-range planning of appliance manufacturers. Relatively low appliance saturation, a sharp increase in wired homes, expansion of power facilities, population, industrial, and income growth, and a rising demand for all types of work-saving home equipment point to excellent profit opportunities for southern appliance merchandisers during the next decade.

These opinions were expressed by Fred J. Walters, vice-president, marketing, Hotpoint, Inc., in a review of the industry's sales progress in this area* and facts which will have a strong bearing on future sales planning.

Lower Saturation Level

"We often think of electric refrigeration as one selling job that has been pretty well completed, yet there is a saturation of only 75 per cent in the South compared with a national figure of 79 per cent," Walters said. "Alabama, Mississippi, Florida, South and North Carolina are as much as 17 per cent below the Southern saturation level. This means that, disregarding a strong replacement market, there are nearly two million southern homes that do not have electric refrigerators."

Nearly 24 per cent more refrigerators were sold in the South in 1948 than in the previous year, while total United States sales reported by the National Electric Manufacturers Association showed only a 3.2 per cent increase over 1948. On a comparative basis, southern refrigerator sales rose from 11.9 per cent of total sales in 1948, to 14.7 per cent in 1949, he said.

The growth possibilities of low saturation appliances presents an even brighter picture for aggressive merchandising, Walters said. The electric range is a good example. Saturation has grown from 18 per cent to 27.7 per cent since the war, a figure which compares to national saturation of 18.7 per cent indicating great acceptance in the South. Yet 6,400,000 homes in the South still cook with old fashioned fuels.

Some states, of course, are further along than others in converting to electricity for cooking. Florida and Tennessee have 52 per cent and 38

While saturation of electric refrigerators is relatively high, there are still many homes throughout the South and other parts of the nation that use antiquated methods of preserving food. Salesmen must dramatize features of modern refrigerators to the customer with relation to the time, money, and convenience elements, and pride in appearance.

***The southern states taken into consideration in this article are Mississippi, Alabama, Tennessee, Kentucky, Florida, Georgia, South Carolina, North Carolina, West Virginia, Virginia, Maryland, and Delaware. Texas, Louisiana, Oklahoma, and Arkansas were not included in this study because they are normally considered to be part of Hotpoint's Southwestern marketing area.**

per cent saturation, respectively. North Carolina, South Carolina, and Georgia have 26 to 28 per cent, and the rest are lower, Mississippi and Kentucky being at the bottom of the list with 11 and 12 per cent.

Laundry equipment represents another ready market for promotion, Walters said. Trends in saturation are shown in the table.

Laundry Equipment Saturation

Appliance	12 Southern States 1950	12 Southern States 1949	United States 1950	United States 1949
Washers	50.4%	46.3%	72.0%	65.6%
Ironers	4.2%	3.5%	8.1%	7.0%

Statewise, Delaware, Maryland, West Virginia, Kentucky, and Tennessee head the list with West Virginia having 98.99 per cent saturation in washers. Mississippi, Alabama, and Florida are running last with saturation of from 21 per cent to 34 per cent. Ironers show largest use in the District of Columbia (19 per cent), West Virginia (9 per cent), and Delaware (6.8 per cent). Other states are at 5 per cent or below with South Carolina and Mississippi at about 2 per cent.

The marketing executive said automatic models of clothes washers will probably show greater growth in the South than the conventional units and greater growth than any other section of the country. Nationally, automatics have a saturation of 9 per cent (compared to 72 per cent for all washers), yet are making up close to half of current sales, a demand that has been making rapid strides in the past three years. In 1947, automatics were only about 20 per cent of total sales. Last year, automatic model sales increased 25 per cent over 1948, while total washer sales decreased 25 per cent. It is logical to assume that with the national acceptance shown by these facts and the relatively low saturation of all types of washers in the South that automatics will do very well here.

Perhaps the best way to indicate the growing importance of the South from the appliance manufacturer's standpoint is to manufacturers' shipments, the official said. The accompanying table gives percentages of total U. S. shipments into the South for a few appliances.

Percentages of Total U.S. Shipments into the South*

Appliance	1939	1947	1949
Refrig.	15.1	16.7	24.4
Ranges	20.6	22.5	33.6
Washers	11.6	15.6	21.6
Ironers	7.8	11.4	11.9

*If Texas, Louisiana, Oklahoma, and Arkansas were included, these figures would be considerably higher.

General business indicators in the South look up, Hotpoint views our appliance potential, Walters said. These are some that the company has taken into consideration.

The increase in the number of

(Continued on page 100)

Summary of Electrical Appliance Sales by States*

State	Refrigerators Year 1949	Refrigerators Year 1948	Refrigerators % Increase	Ranges Year 1949	Ranges Year 1948	Ranges % Increase	Water Heaters Year 1949	Water Heaters Year 1948	Water Heaters % Increase
Alabama	72,835	50,783	43.3	27,490	27,722	—0.7	7,697	9,110	—15.6
Arkansas	67,970	35,951	89.5	6,587	7,194	—8.4	2,038	2,256	—9.6
Delaware	7,992	7,295	9.6	2,077	2,264	—8.1	1,046	1,159	—9.7
D. C.	38,102	43,703	—12.8	5,739	7,658	—25.2	2,038	2,192	—7.0
Florida	94,152	74,829	25.9	37,015	38,254	—3.2	16,111	19,919	—19.0
Georgia	86,188	70,123	22.9	33,041	38,793	—14.7	10,200	13,782	—25.9
Kansas	45,733	39,293	15.0	7,920	12,650	—37.5	2,247	3,084	—27.0
Kentucky	73,736	50,175	46.9	16,765	17,968	—6.5	4,452	5,915	—24.8
Louisiana	87,842	54,085	62.2	3,965	3,783	—19.0	1,204	1,171	2.8
Maryland	49,666	53,974	—8.0	8,099	10,507	—23.6	3,321	4,167	—20.3
Mississippi	53,151	31,217	70.0	8,827	9,082	—2.8	1,969	3,079	—36.0
Missouri	119,448	113,329	5.2	22,758	32,728	—30.5	9,951	12,262	—18.8
No. Carolina	101,444	71,529	41.8	47,241	44,506	6.1	20,377	19,564	4.0
Oklahoma	66,667	50,293	32.5	4,710	7,565	—37.7	1,410	1,358	—18.2
So. Carolina	46,349	32,373	43.3	22,825	22,499	1.4	8,704	11,386	—23.5
Tennessee	115,828	79,102	46.3	52,227	53,921	—3.1	12,054	15,686	—23.1
Texas	257,180	194,970	31.0	20,829	27,586	—24.4	5,270	7,010	—24.8
Virginia	64,643	58,145	11.1	23,699	26,066	—9.1	11,296	12,088	—5.6
West Virginia	56,417	47,326	19.2	15,562	19,042	—18.5	4,264	5,961	—28.5
Total South	1,504,943	1,158,595	29.9	366,476	409,888	—10.7	125,449	151,146	—17.0
U. S. Outside South	2,155,771	2,474,608	—12.9	535,540	726,215	—26.3	230,085	280,436	—18.0
U. S. Total	3,660,714	3,633,203	0.8	902,016	1,136,103	—20.6	355,534	431,582	—17.7
South in % of U. S.	41.1	31.9		40.6	36.0		35.3	35.1	

*The unit sales summary given above is based on figures released by the National Electrical Manufacturers Association. They do not reflect the sales of all manufacturers, but are the distributor and dealer sales of the following participating manufacturers: 11 refrigerator manufacturers, 19 range manufacturers, and 24 water heater manufacturers. The sales reported represent a substantial percentage of total sales, and the comparison of the two periods should indicate industry sales trends.

SERVICE FIRST

. . . "Let the customer get the best of you occasionally!"

by Sophie W. Ellis

Refrigerators and washers accepted as trade-ins, such as this washer being rebuilt by mechanic John Zawislak and Service Manager Ralph Niemeth, are completely rebuilt and refinished like new by Pfeifers of Arkansas.

The women appliance customer wants full value for the dollar she spends. Sometimes, if she can get it, she wants a bit more.

A man hardly would dare make or hold a statement, especially if he is in business to sell to women. But this correspondent, who is about to reveal how one dealer pleases women in a large appliance department, is not a man. She can remind you that even when customers who come in to buy a refrigerator or a washer, paced under the Fair Trade regulation, are the same customers who watch the sales when the first and last are weighed at the load time.

The appliance department of Pfeifers of Arkansas, 6th and Main, Little Rock, is operated as are all other departments in this large department store that supplies a county of needs for every customer, the customer must be satisfied with every transaction.

Appliance Manager W. J. Glescock says, "Women customers of the department store have learned that they can get their full money's worth in all departments. That requires us, in the appliance department, to offer refinements in service that win the customer's confidence. We have to give better service here than the customer expects from the appliance store down the street that sells nothing but appliances."

All Practical Servicemen

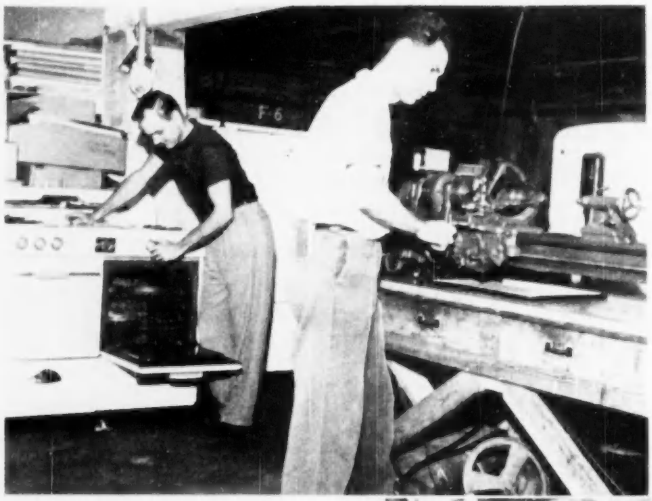
One of the most unusual features about the Pfeifer appliance department is that every man connected with it, from the young salesman who sells electric dishwashers to Manager Glescock, is a practical serviceman. All of the men can make efficiently with the appliances they sell. That knowledge, Mr. Glescock points out, makes them better salesmen, able to sell more customers. It also strengthens the good will.

Although the repair department is hidden away on the basement floor, Mr. Glescock designates it as "the heart of the appliance department." Most of the adjustments demanded by exacting customers are made through repairs.

A repair sale customer is often a "tough" customer, who is a little suspicious of the service given her. She sometimes looks for defects that do not exist, or demands more than she paid for. When this repair department has such a customer, the serviceman make an extra effort to satisfy her.

Sometimes, to please a very difficult customer, the repairman makes two or three extra calls. This does not indicate that the service costs a lot of the very best. It only proves that the store is willing to lose money on some sales to please the customer.

Mr. Glescock, while the service manager of many other department stores, declares that it pays the store to offer complete repair service on all appliances, no matter where the merchandise was bought. Nearly every



(Left) Although the repair department is on the basement floor, Appliance Manager W. J. Glasscock designates it as "the heart of the appliance department." Most of the adjustments demanded by exacting customers are made through repairs, and good tools aid the trained mechanics in turning out a finished job. (Center) A well-stocked service department enables the appliance department to answer all service calls promptly. (Bottom) A rebuilding job on a refrigerator includes cleaning and repairing motor and compressor, installing new door seals, and retinning the shelves.

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bells daily, asking the prospect if she would like to trade her old refrigerator or washer for a new one from Pfeifer's.

day the store answers service calls for people whose names are not on Pfeifer's appliance customer index. Service calls usually mean that the customer's appliance is wearing out, and that she will be needing a new one soon. The salesmen get that customer's name for the prospect list.

The basement repair shops, in charge of Service Manager Ralph Niemeth, carries a heavy inventory of repair parts. One of the most profitable operations done here is reconditioning trade-ins for resale in the special used appliance department. Mr. Glasscock says that 25 per cent of his refrigerator and washer customers have something to trade for the new unit. If the trade were not made, the sale would be lost.

All Appliances Accepted

Any used appliance that turns is accepted for trade. Refrigerators and washers are completely rebuilt in the shops equipped with machinery and tools for making all repairs and refinishing the surface almost like new.

A rebuilding job includes cleaning and repairing motor and compressor, installing new door seals, and retinning the shelves.

After the appliance has been given a new paint spray job, it becomes highly desirable and attractive merchandise that has such good display qualities it is shown on the floor then in a special department behind the front appliance display section.

Pfeifer's does not leave to chance the drawing power of their trade-in service. Classified advertisements in the newspapers every day attract many customers. Six salesmen ring door

The salesman, invited in by the housewife, appraises her appliance on the spot, subject to the okay of Mr. Glowacki. The amount offered by the salesman is seldom questioned at the store. All of those we salesmen know something concerning appliance repairs. They can judge pretty accurately what it will cost to recondition the customer's old appliance.

These salesmen mechanics can usually always tell the customer what is wrong with an old appliance that is not functioning efficiently. Sometimes they can even make small adjustments or repairs on the spot.

Plus Values Necessary

"From now on in this buyer's market," says Mr. Glowacki, "we who sell appliances are going to have to get the edge on competition with extraordinary service.

"Showing handsome merchandise on an attractive display floor is not enough. Lavish advertising is not enough. Good salesmanship is not enough. We have to make the customer feel that when she buys an appliance from us she is getting the best value her dollar can buy in permanent utility and satisfaction.

"Our unusually well-equipped and well-manned service department enables us to offer the top trade-in price to the prospective customer for a new appliance. If the trade-in price, we can make it 'double through' on reconditioning."

Recently, we mean only weeks ago, pressed in trade that the repair department was literally swamped. Weeks and months would have been required to recondition the series of refrigerators and washers.

Mr. Glowacki changed and the story

"Continued on page 200"

(Above) Rebuilt refrigerators and washers are shown on the first floor in a special department behind the front appliance display section. When washers such as this one are put on the display floor, they become highly desirable and attractive merchandise. Special sales are often held to advertise the store and clear out the stock of trade-ins on hand. (Left) When this salesman turns on the sales talk to this customer, he stresses the best service obtainable from Pfeifer's. She feels that when she buys an appliance from this store, she is getting the best value her dollar can buy in permanent utility and satisfaction.

SPARKING SALES

Appealing to the home front stimulates interest in contests . .

NEVER UNDERESTIMATING the power of a woman was the talk one appliance dealer applied to get the most from his sales contest. He knew what a vital effect the fair sex can be in any contest and he used this natural feeling to stimulate his sales.

Since all of his salesmen were married, and he didn't want to be responsible for any divorces, he didn't want to bring in an attractive girl to act as a demonstrator. That would be too dangerous, but he did turn on the power of women to make his sales contest a real battle for the bucks among his salesmen.

When all the plans for the sales contest had been drawn up, this appliance dealer didn't announce the contest to his salesmen. First he started a tease campaign with post cards addressed to the wives of the salesmen at their homes. This campaign lasted a week with a different post card arriving every other day.

Monday morning a post card was mailed to the wives with the following message:

"Would you like to have a new television set? Free?"

On this post card there was no indication of where the card came from, but of did what the ladies' curiosity. When the salesmen reported for work Tuesday morning they were all talking about the post cards that came to their homes—a clever advertising stunt to some competition they thought.

Wednesday another post card was dispatched to the wives of the appliance dealer's salesmen with this message:

"Would you like to have a two week vacation with all expenses paid? Free?"

More comments from the salesmen the next day and more curiosity on the part of the salesmen, but still this appliance dealer didn't announce his sales contest. He knew how curious women are and he wanted to dangle one more prize before them before the final announcement.

Thursday another post card was delivered to the wives with this message:

"Would you like to have a complete set of matched luggage? Free?"

Early morning a letter went out to all the wives without the regular letterhead of the appliance store. This was done to keep the air of mystery about the contest and to insure reading by all of the wives before the husbands arrived from work in the evening. Copy for the letter listed all of the prizes for the contest and asked for their help to make this sales contest a roaring success.

This novel approach to the sales contest got it started out with a great deal of interest. Sales started climbing and the appliance dealer was sure women are a powerful influence in stimulating salesmen, especially if the prizes are something they want.

At the end of the first week of the sales contest, he mailed a letter to the wives of the three top ranking salesmen — congratulating the wives, not the salesmen. This had an unusual effect, and at first the dealer was afraid it might cause some domestic trouble, but everything went over as he had planned—sales kept climbing to new high marks.

All of the other salesmen's wives received post cards again with the following comment:

"Give the old man a pep talk . . . his sales are lagging;" or "Feed the old man beans until he brings home the bacon in the sales contest;" or "Let the old man out at night—he might make a sale to help win the sales contest for you."

Everyone got a kick out of these post cards and they did exactly what they were designed for—more enthusiasm in the sales contest. Sales kept climbing all during the contest, and when it was over, a special dinner was held to award the prizes to the winners.

Daily results were kept a secret during the last three days of the contest to keep an air of mystery around the winners. Most of the salesmen were running neck and neck, so there was no one who was sure he had won or hadn't won until the dinner was held.

Then, to add interest to the dinner, the program was to congratulate the winners. In a talk after the dinner the appliance dealer kept talking about "Mr." Johnson and "Mrs." Cratton instead of salesman Johnson or salesman Cratton. When the final results were announced, the salesmen didn't receive the prizes—they were awarded to the wives.

Results? This appliance dealer is well satisfied with this type of sales stimulation plan. It built up his sales and didn't fall off immediately after the sales contest was over. His sales crew has received enthusiasm and a spirit of competition that hadn't existed before and there weren't any divorces.

Sale to Remember

by B. B. Cunningham, Manager
Eureka Appliance Company
Pine Bluff, Ark.

THIS PROSPECT, for a vacuum sweeper, lived on a farm out in the country and was the prospect most bankers so long as far as our bank was concerned.

Nevertheless, I went out to the farm home and called on the lady. She wanted the sweeper but said that her husband did all the buying and that she was certain that he wouldn't buy a vacuum sweeper.

Her husband wasn't home, but I got directions from the wife on how to locate him. He was at another farm some miles away and so without any hope whatever of completing a sale, I drove all over that section of the country looking for the husband but never did find him.

I mentally decided to erase the name from the prospect list and headed home. My route happened to be such that I again passed in front of the farm home of the prospect.

Out a short distance from the house I saw a young calf that had its head entwined in the bands of a hound and was down and was in the

(Continued on page 99)

THE HOTTER IT GETS . . . THE HOTTER IT GETS!

Get on the Fedders Band-Wagon for a nifty-fifty

Yes, the hotter the weather, the hotter your sales of Fedders Room Air Conditioners. It's the fastest growing line in the fast growing Room Air Conditioner Industry! With prospects for other appliances running thin, now is the time to cash in. Fedders has packed 54 years of engineering experience to bring you a complete new line of attractive furniture-styled models.

HISTORY MAKING COOLING CAPACITY! For the first time Fedders offers *full* ½ ton (6020 btu/hr.) and *full* ¾ ton (9010 btu/hr.) window models. Ratings certified at ASRE conditions.

COMPARE with other room air conditioners regardless of price. Look over all Fedders sales-clinching features. Yes, you'll agree that Fedders gives your customers *more* air conditioner per dollar.

CHECK ALL THESE FEDDERS FEATURES . . .

1 **NEW HINGED-LIFT TOP** . . . makes replacement of filters easy. All controls concealed.

2 **HERMETICALLY SEALED SYSTEM** . . . completely welded! . . . lubricated for life . . . diminishes service. Five-year protection plan.

3 **QUIET OPERATION** . . . A triumph of Fedders engineering. Seals out street noises, cools room silently and provides better year-round living and working conditions.

4 **FINGER-TIP CONTROL** . . . exclusive Comfort Circle Grille lets you direct the flow of air in any direction, where you want it . . . where you need it . . . never a draft.

5 **TWICE THE DEHUMIDIFYING AREA** . . . twin evaporators double the capacity for wringing out moisture.

GET IN ON A GOOD THING!

MAIL COUPON TODAY

Fedders-Quigan Corp., Unit Air Conditioner Division
Dept. E-2, Buffalo 7, N. Y.

Gentlemen: Please send me complete information on the 1950 line of Fedders Room Air Conditioners for, as I like to get ahead and cash in on profit-bound wagon selling this new comfort appliance.

Name _____

Company _____ Address _____

City _____ County _____ State _____

Making Roaster History
No. 900 (SPECIAL)

$29.95 RETAIL

This roaster which was designed and produced to aid distributors and retailers in boosting sales to an all time high during National Electric Housewares Week may still be available in your territory. Distribution has been handled on an allocation basis. We suggest that you check your supplier at once.

BUY THE QUANTITY THAT YOU WILL NEED WHILE THEY ARE AVAILABLE!

More people are thinking about electric housewares today than ever before in the history of the industry. Electric Housewares Week brought into the market a merchandising force of truly atomic power and scope. This compelling force will continue to manifest itself in retail display rooms in exact ratio to the output of effort put out by the individual retailer.

EVERHOT

ELECTRIC HOUSEWARES

Everhot DeLuxe Roaster-Oven
Model 900 UT-365 (SPECIAL)

- Precision built.
- Full 18 quart capacity.
- Polished aluminum self basting cover.
- Latest design, improved finger tip cover control. An Everhot exclusive.
- Oven glass dish set included.
- Roller Time-Temperature Guide in control panel.
- Porcelain enamel cooking well and inset pan.
- Highest quality thermostat.

SOUTHERN REPRESENTATIVES

S. T. SCHOOLAR COMPANY (Virginia, South Carolina, North Carolina) Charleston, S. C.
R. G. TITHERINGTON, (Tennessee, Mississippi) 127 Exchange Street, New Orleans, La.
J. D. SHEEHAN, (Texas, Oklahoma) 2930 La Vista Drive, Dallas, Texas
FRANK W. COLLINS (Georgia, Florida, Alabama, Eastern Tennessee) 50 Spring St., N. W., Atlanta, Ga.
E. J. CAMOS, (Missouri, Arkansas, Western Tennessee) 3700 Pine St., St. Louis, Missouri
F. S. HOWARD (Kentucky, West Virginia) 500 S. A. & S. Building, Louisville, Kentucky

THE SWARTZBAUGH MANUFACTURING COMPANY • TOLEDO 6, OHIO

News About People

Appointment of **Wesley E. Van Gorder** as new **Coolerator** district manager for the Southern territory has been announced by **W. C. Conley, Jr.**, Coolerator sales manager.

Associated with The Coolerator Company since 1956, Mr. Van Gorder was formerly a field service engineer for this territory. He will direct the sales of Coolerator electric ranges, refrigerators, and home freezers in Alabama, eastern Tennessee, southern Louisiana, and southern Mississippi.

Wesley E. Van Gorder

He succeeds **H. E. Vaughan** who recently resigned.

•

The appointment of **A. J. (Al) Lopez** as Southwestern District sales manager for **Thor Corporation**, producers of home laundry appliances, has been announced by **Frank J. Simpson**, vice president.

Mr. Lopez will maintain headquarters at 5220 Pineclou Ave., Dallas.

Before joining Thor, Mr. Lopez served 16 months as Southwestern Regional manager for Hamilton Manufacturing Co. Previously he had been Midwestern sales representative for Encyclopedia Britannica.

•

James H. McClain has been appointed to the position of sales representative for the Richmond territory of the **Toastmaster Products Division** of **McGraw Electric Company**, it was announced recently by **W. E. O'Brien**, the company's general sales manager.

For the past year Mr. McClain has been assisting **S. C. Rexinger**, commercial department sales manager in Toastmaster Product's home office in Elgin, Ill. Prior to that time, he was employed by General Finance Interstate in Chicago.

Mr. McClain will handle all "Tuscarora" products including those appliances for household use as well as those for the food service industry.

The states covered by Mr. McClain will be Virginia, North Carolina, South Carolina, and parts of West Virginia and Tennessee. He will be headquarters in Roanoke, Va.

•

Johnston P. Scott has been named manager of the Refrigerator and Freezer Division of **A. J. Lindemann & Hoverson Company**, Milwaukee. The L&H organization is primarily manufacturer of range and water heaters, refrigerators, refrigerator and home freezer units for the last year.

Mr. Scott assumed as director of sales for Universal Cooler Division of Newport Steel Corp. to take the new position. He had been with the Universal Cooler Division for seven years. Prior to that he had been associated with Acme Adding Machine Co., Bendix Home Appliances and Nash-Kelvinator Corp.

•

Appointment of **Linwell G. Collins** as sales promotion manager and **T. Jack Cogg** as commercial advertising manager has been announced by **J. C. Running**, advertising manager of the **Kelvinator Division** of **Nash-Kelvinator Corporation**.

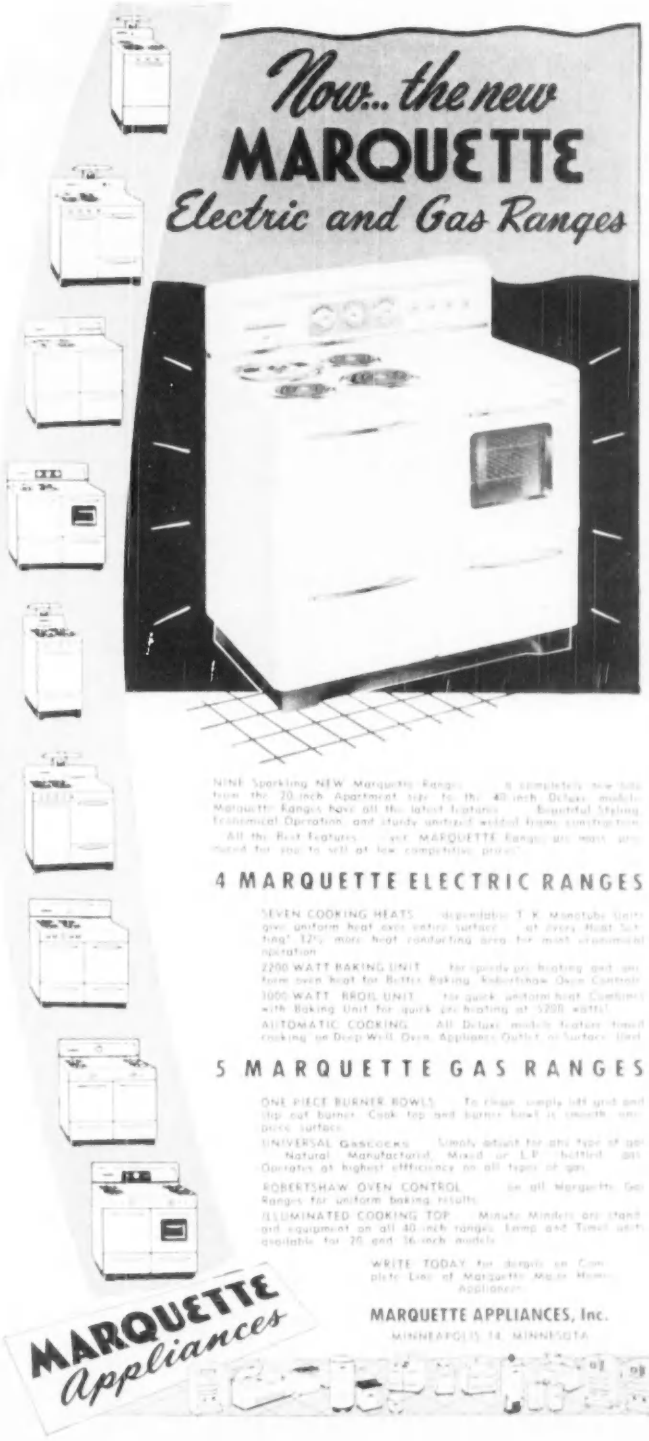
Mr. Collins joined Kelvinator in 1948 as commercial advertising manager. Following three years service with the U. S. Navy. Before that he served in advertising and sales positions with Sears, Roebuck & Co., Chicago, Ill., B. F. Goodrich Rubber Co., Akron, O., and the Wm. Wrigley Corp., Sunny Cuba, Inc.

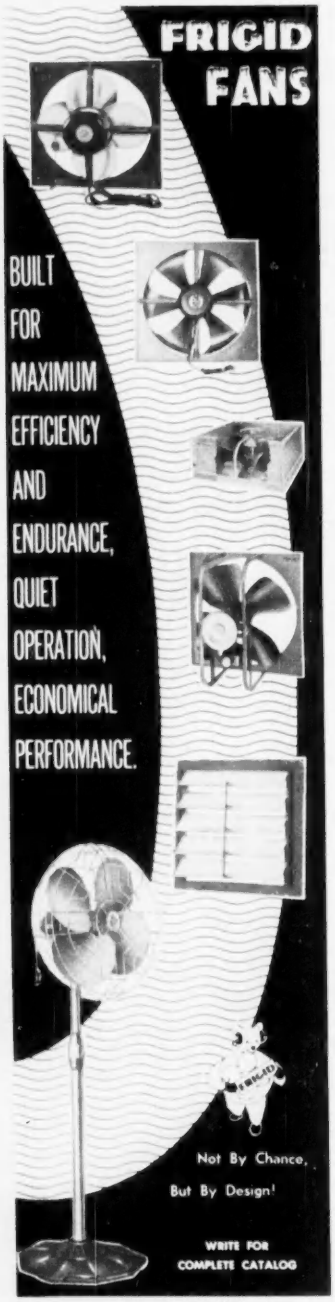
Mr. Cogg has been with Kelvinator Corp. in the sales and advertising department. He has been technical copy supervisor with the advertising department since 1944.

•

A. S. A. Kansas City, Mo., wholesaler of K-D-H appliances from its Southwest Distributing Co., 2706 Broadway. The firm was organized by Albert E. Hynes of the Hynes Grain Co., Kansas City, chief stockholder, a partner of the Kansas City and Chicago firms of Scale, founded a chain of appliance and specialty stores in Colorado years ago.

Sales goals for the new company call for all of Kansas and Western Missouri and Missouri. Annual goals for the company will provide sales of refrigerators, home freezers, home laundry equipment and some gas ranges.





Southeastern Representative & Warehouse

W. H. BERRY COMPANY

45–47 ALABAMA ST., S.W. ATLANTA 3, GEORGIA

CIRCULATORS & DEVICES MFG. CORP.

BROOKLYN 32, N. Y.

Dramatic Fan Display Available to Dealers

Now facing its first season for public appearance is the dramatic Vornado Air Test Laboratory. The season's "bookings" for the Vornado Air Test Laboratory are now being prepared, and officials of the O. A. Sutton Corp., 1812 West Second, Wichita, Kan., report that requests have been received from all over the nation. A near complete schedule is reported, but additional bookings can still be honored.

Here is how the test works. Visitors see a plexiglass walled room filled with colorful cellophane streamers suspended from the ceiling—in planned arrangement to show the local movement of air in every direction. Completely enclosed, the room is shut off being transparent affords a perfect view for the tests. An ordinary electric fan of good make is set into action. The streamers inside the test room show the full extent and scope of the air stream produced by the fan.

Then, the conventional desk fan is turned off and a Vornado air circulator is turned on. Again, the movement of the suspended streamers is the measure of the air stream.

The display is attractive and streamlined, with all the public appeal inherent in a contest. Vornado's Air Test Laboratory will bring to the public for the first time a brand new and completely effective method to measure fan performance.

Vornado is a complete air circulator family, with models ranging from the smallest desk type to the big capacity heavy-duty industrial models and also including a brand new line of window fan styles.

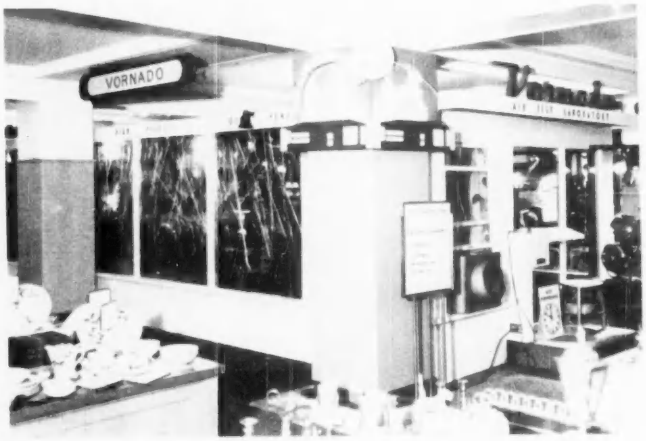
Fan Association Names 1950 Leaders

At the annual meeting of the Propeller Fan Manufacturers' Association, held recently at Daytona Beach, Fla., the following officers were elected for the coming year: president, R. G. Kramer, manager, Air Controls, Inc., Cleveland, Ohio; vice-president, W. H. Holt, manager, Fan Merchandising & Standard Apparatus, Div., Buffalo Forge Co., Buffalo, N. Y.; and secretary-treasurer, J. O. Mouras, 7157 Gaudion Bldg., Detroit 26, Mich.

The Association has been very active in establishing a code for the installation of attic ventilation fans and fan performance standards for the benefit of the general public. An industrial ventilation guide will also be issued shortly, and five new members have recently joined the group of association.

Auditorium Designed For Product Schools

Convenience product schools, dealer and organizational meetings is always a more problem for distributors. Most schools are simply rending rooms



This view of the Vornado Air Test Laboratory shows the demonstration as it appears when set up ready for action. The active display compares different types of air circulators by operating them in a plexiglass walled room filled with colorful cellophane streamers suspended from the ceiling. The streamers are in planned arrangement to show the movement of air in every direction. The entire unit is demountable for transportation.

"The THRIFTY buy in '50"

CHILL CHEST

Now LARGER CAPACITY IN LESS SPACE

New LOWER PRICE PER CUBIC FOOT

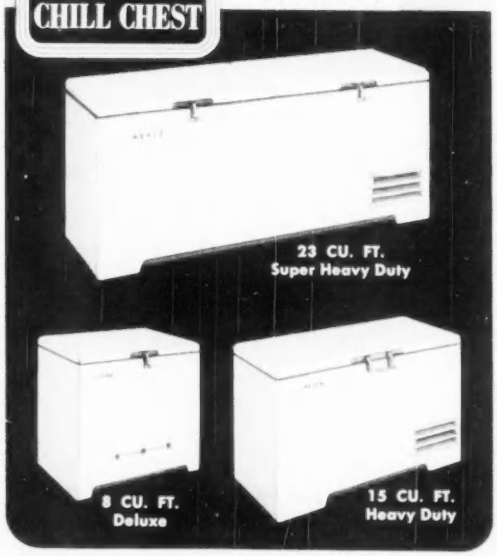
The CHILL CHEST Line offers you many advantages over other home Food-Freezers! The 8, 15 and 23 cubic foot CHILL CHESTS . . . advanced in design and engineering features . . . give big food storage capacity. They are no larger outside than most 6, 12 and 20 cubic foot freezer cabinets. Priced to compete with these smaller sizes, CHILL CHEST gives you a distinct Sales advantage — Lower Price per cubic foot!

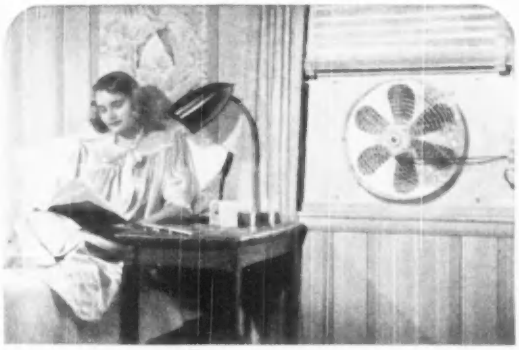
Get all the details Now about the 1950 CHILL CHEST PROGRAM.

Wire, Phone or Write to:

REVCO, INC.
DEERFIELD
MICHIGAN

Revco CHILL CHEST





NEW Electrically Reversible Window Fans Pace the Fast-Selling Signal Line!

FEATURES

- Electrically reversible capacitor type motor — on models WR-122 and WR-162 only.
- Ideal for night cooling—no special carpenter work or wiring required, just plug in.
- Fit wide variety of window sizes—wing nuts provide finger-tip control for sliding, telescopic panels.
- Neutral finish—good looking, white baked enamel finishes harmonize beautifully with other room furnishings.
- Quiet operation—rubber cushioned motor mounts block transmission of noise.
- Safety-engineered—closely spaced, bright wire safety guard keeps fingers and curtains away from blades.
- Maintenance-free—oilless type bearings and quality construction make *Signal* fans sell and stay sold.
- Special voltages—available on all fans, add 10% to list price.
- Five models—reversible WR-122—12" and WR-162—16", non-reversible W-101—10", W-121—12" and W-201—20".

ONE WAY TRAFFIC

Yes, *Signal* and *Cool Spot* Fans are ONE WAY TRAFFIC Appliances! Why? Because they are made to sell and stay sold. You pocket the entire profit from each sale because *Signal* and *Cool Spot* Fans don't come back for costly, non-billable service. Find out about more profitable *Signal* ONE WAY TRAFFIC Appliances from your nearby *Signal* supplier today!

Signal

SIGNAL ELECTRIC MFG. CO.
MENOMINEE 6, MICHIGAN

DESK FANS • PEDESTAL FANS
KITCHEN VENT FANS • EXHAUST FANS
FLOOR FANS • DRILLS • GRINDERS

New! EASY-TO-SELL

FASCO ARCTICAIRE FANS for '50

The Line that SOLD OUT in '49 Now FOUR WAYS BETTER for '50

Model N-55
12" Lo-Level Fan
3 speeds
(Also available for '50 in 10" size single speed)

● NEW SIZES
The beautiful, fast selling FASCO Lo-Level Fan . . . now made in TWO sizes . . . 12"—three speeds . . . and 10"—single speed.

● NEW FINISHES
Always tops in eye appeal . . . FASCO Fans for '50 are color-styled, finished for new beauty that lasts for years.

● NEW MODELS
You'll see several other new sure-fire sellers at the Housewares Show . . . or WRITE NOW for advance information . . . they're the hottest news in the industry.

● NEW EFFICIENCY
FASCO Fans for '50 are again out front in overall performance . . . delivering more air, more quietly, with longer trouble-free life.

16" Model N-163
DeLuxe Heavy Duty

10" Model N-103
Standard

12" Model N-128
Heavy Duty

16" Pedestal Model N-165 Adjustable in height—4 to 7 ft.

12" Model N-121
Standard

10" Model N-101
DeLuxe Heavy Duty

WRITE!
Be sure to get your copy of the 1950 FAN CATALOG . . . NOW!

FASCO INDUSTRIES, INC.
ROCHESTER 2, N. Y.

This modern air-conditioned auditorium constructed by McGregor's, Inc., Memphis distributor, saves time and money. Expense normally incurred when other facilities are used for the meetings is lessened sharply.

in hotels or public buildings. But McGregor's, Inc., appliance distributor in Memphis, Tenn., has constructed an all purpose air conditioned auditorium that provides modern answers to this problem.

With two stages, one a permanent exhibit of connected and operating appliances and especially made upholstered theater type seats so arranged to provide maximum comfort, the firm has devised what it believes to be the best method for having adequate meeting space where needed. Actually, about twice the floor area is normally found in a theater or other public auditorium is devoted to each person. The room can be divided by a velvet drape mounted on a travelor for smaller groups or the entire auditorium used at once. Total seating capacity is 700 CFS in the main section and 62 in the smaller. The main stage is completely equipped for motion pictures in dramatic presentations, including red, white, and blue floodlights and vertical spots all controlled by hand operated dimmers to achieve dramatic effects. The smaller stage may be used for training of product schools. Concealed rooms provide storage space for props which is completely equipped electric open source ample food supplies for cooking schools.

The entire ceiling is soundproofed and lighted by fixtures set flush with the ceiling. Special footlights or floodlights are located in front of both stages.

The seating area is air conditioned for both winter and summer comfort. A 15 horsepower compressor complete with a 20 ton evaporative condenser supplies power and saves as much as 90 per cent on water consumption. Suspended type air conditioners are used with a separate installation for each section of the auditorium. In the main section, an 18 ton capacity unit with a six row cooling coil is installed. In the small section, a nine ton air conditioner is placed with a four row cooling coil. Both are connected to duct heaters and humidifiers for winter use. The air conditioning ducts are concealed in the walls with vents spaced strategically near the ceiling. With this system each part of the room may be used separately yet still retain the comforts of air conditioning.

Since the opening of the auditorium approximately 32 meetings have been held with a total audience of over 2,200. Already the cost of the auditorium is being realized through the saving in driving time, and expense normally incurred when other facilities are used for meetings.

Product Parade

Universal Iron

The new Steam Sno-R iron has been introduced by Universal Appliances manufactured by Lindsay Ware & Clark, New Haven, Conn.

The form shape and size of irons has been changed in the new iron. Universal says that the new shape is as best such with a point added for maximum glide efficiency. The iron is 10 inches long and has a new side

SERIES 250 HEETAIRES — 1500 to 5000 WATTS WITH OR WITHOUT BUILT-IN THERMOSTATS

HEETAIRES

give you EVERYTHING your CUSTOMERS want . . .

★ 1000 to 6000 Watts

★ Radiant, Black and Fan-Forced Heat

★ Built-in or External Automatic Thermostatic Heat Controls

★ Wall Inserts, Wall-Surface Attachables and Portables

Tested & Listed Under Reexamination Service by Underwriters' Laboratories, Inc.

There's a HEETAIRE for every purse and purpose . . . and when you sell HEETAIRES you sell the right electrical space heater for both!

And that means more sales and more profits for you!

DEALERS: Write us for your free GUIDE TO QUICK HEAT INC. . . . and the name of your nearest HEETAIRE wholesaler

WHOLESALERS: Write us for the HEETAIRE sales and profit story—and the name of our representative in your territory

MARKEL ELECTRIC PRODUCTS, INC. — **LASALLE LIGHTING PRODUCTS, INC.**

139 SENECA ST. • BUFFALO 3, N. Y.

ELECTRICAL SOUTH

VOL. 30 NO. 5

MAY 1950

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BARON CREAGER, *Southwestern Editor*
1105 National City Bldg., Dallas, Tex.

T. W. McALLISTER, *Vice-Pres., Editorial Director*

FRANK P. BELL, *Business Manager* J. A. MOODY, *Production Manager*

Business Representatives

L. B. CHAPELL, 427 W. 5th St., Los Angeles, Calif. Tel. Mich. 9843
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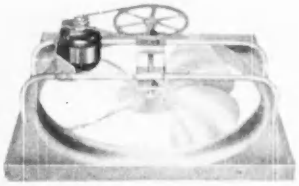
Murray

OFFERS YOU

Your Best Sales Opportunity

THE MURRAY VERTICAL VENTILATING FAN

This horizontal mounted vertical discharge fan has heavy gauge steel housing, with frame of one inch seamless tubing, die formed. The blades are Torrington Patented die formed statically and dynamically balanced. Comes in sizes 24", 30", 36", 42" and 48". The bearings are especially designed — sealed Ball Bearings with permanent lubrication. All Murray fans are rated in accordance with standard test code adopted by ASHVE and NAFM.



Write for full details

THE MURRAY CO. of TEXAS, Inc.

Atlanta 1, Georgia Dallas 1, Texas

Sales Agents

H. C. BIGLIN CO., Inc. Atlanta 3, Ga.

117 Harris Street, N.W.

table-top style automatic electric water heater. This heater is now available in three sizes, with either porcelain or linoleum-top working area surface. This surface gives Mrs. Homewife 494 to 564 additional square inches of work space.

Conveniently located on the front of the heater is a 110-volt electrical outlet which makes the top working surface ideal for toaster, waffle iron, etc. Or, if preferred, this unit can be equipped with a visible hot water indicator rather than the convenience outlet.

The Wagoner Table Top Automatic Water Heater is designed to fit side by side with a Wagoner Electric Range. It gives plenty of working area near the stove.

•

16-Inch Window Fan

A new 2-speed, 16-inch window fan announced by the Emerson Electric Manufacturing Co., St. Louis, Mo., was designed to provide cool comfort by air circulation in small apartments, several rooms of a home, small stores, shops, etc.

The new fan is equipped with a convenient carrying handle for portability, a removable guard which for converting the fan into an air circulating fan for daytime use, and mounting panels which are adjustable 27¾ to 36 inches in width, between window stops. Chain and screw attachments are also supplied for metal frame, without panels, for windows 16 by 27 inches wide.

•

Exhaust Fan

New summary for the complete 1950 Lau Leader line of window fans is the new "Nitaire" NA20W, manufactured by The Lau Blower Co., Dayton, Ohio.

As exhaust fan only, the fan is styled in a front grill, baked enamel finish. Attached adjustable expanders are provided, with exclude dials to fit the fan window up to 24 inches in width. Other features include a close mesh wire guard for safety. Variable

speed switch, special resilient motor mounting cushions or frame, 1/12 hp motor, 2500 r.p.m. at high speed, and deep venturi with deep pitch 20 inch blade.

Size is 22 inches square, 16 3/8 inches deep, net weight is 20 pounds and the fan comes complete with a 6 inch plug-in cord 10' white rubber

•

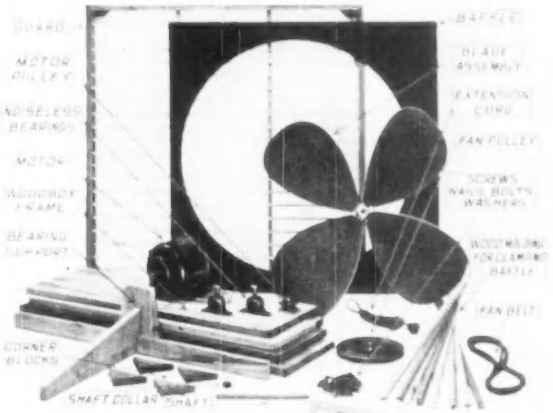
Apartment Range

"NO APARTMENT FREE range" Style Peak Electric No. 1580 has been announced recently by Stell Stove & Manufacturing Co., 409 South Lath St., Nashville 6, Tenn.

The new range has an 8 inch, 1K unitherm, 1000 watt burner and two 6 inch, 1100 watt burners each equipped with a 7 heat switch. The range oven measures 19 x 17½ x 17½ inches, equipped with a top unit 2400 watt and lower unit 2000 watt.

The oven is of one piece porcelain with Robertshaw oven control. Fiberglas insulation, adjustable manifold oven racks, pilot ignition and broiler ignition, the top and grease drawer lights.

This model is also available with long cord and attractive colored finish, style Model 1580X.



BIG MONEY FOR DEALERS, JOBBERS

With the Fastest Selling Fan Yet!

Completely packaged, everything that's needed, quality parts—at a very low price. Everybody's looking for low prices—your customers will snap 'em up. Fast seling—quick turnover—good profit!

WRITE FOR INFORMATION

S. J. STEWART ELECTRIC

527 St. Joseph St., New Orleans 12, La.

Highest Quality Water Heaters at COMMON SENSE COST

Important selling features make these water heaters move fast and yield greater profits to you

- Elno Rustopper Anode Rod
- Wheeling Extra Heavy Tank
- Westinghouse Heating Element and Thermostat
- Fibre Glass Insulation
- Ten year guarantee and warranty plan
- Peak Performance —— Peak Profit
- Table Top and Upright Models

Write for

Full Information and Literature

ADACAR MANUFACTURING CO.

NAPIER FIELD DOTHAN, ALA.

New! FASCO

10" "CEIL-N-WALL" KITCHEN VENTILATOR, Model 1020

FAN UNIT

FAN AND OUTSIDE WALL HOOD ASSEMBLY

For ceiling mounting or in inside wall, directly above stove

- Designed *in collaboration with America's largest builders* . . . for quick, easy, inexpensive installation.
- New FASCO Turbo-Radial propeller, specially engineered for pressure through ducts . . . develops pressure unobtainable with ordinary fan blades . . . three speed control.
- Unique air intake prevents air re-circulation at inlet.
- Outside wall cap—aluminum . . . rustproof—has built-in balanced louvres. Overhang keeps out rain, drafts, cold.
- Beautifully designed . . . superbly finished . . . priced right.

FASCO wall ventilators are used by America's largest builders . . . 15,000 IN LEVITT HOUSES ALONE! The new FASCO "CEIL-N-WALL" vent will be a leader too!

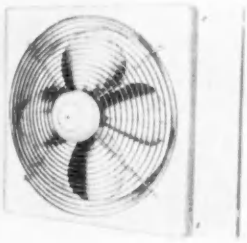
WRITE, WIRE or PHONE for complete information. FASCO Industries, Inc., 50 Union St., Rochester 2, N. Y. (Phone HAmilton 1800).

FASCO INDUSTRIES, INC.
ROCHESTER 2, NEW YORK

Window Fan

The new Robbins & Myers 18-inch window fan features two-speed, reversible operation. Especially practical for small homes and apartments, the unit is adjustable to fit any window up to 55 inches wide. Compact and light in weight, it can be easily installed for cooling efficiency in any location.

For daytime cooling the fan forces fresh breezes into the room. At



night, by simply reversing the rotation, hot air is exhausted from the room and replaced by cooler outside air. Big, broad blades, precision balanced for smooth operation, turn at relatively slower speeds. The unit is powered by a direct-connected motor, mounted on rubber to prevent noise and vibration.

Finished in rust-resistant enamel, the unit is equipped with a chrome plated, ribbon type spiral steel guard for protection against personal injury.

•

Two-Heat Percolator

A new two-heat percolator of polished aluminum has been announced by Dominion Electric Corp. The appliance has an eight-cup capacity, is light in weight, well balanced and attractively styled.

Black plastic handles are cool and

black plastic feet protect the table surface from heat. The transparent heat indicator shows coffee quickly on "perk" or keep it hot indefinitely when turned to "warm."

The new percolator has a built-in strainer, and is furnished complete with a standard length cord. It operates on 120-125 volts, 50-60 cycles at 475 watts.

•

Electric Grill

The Waverly Model 2800 Avion Electric Grill will soon take its place on dealers' counters at the popular manufacturer's price of $31.95.

Avion offers new ease of cooking. Does grilling, sautéing, boiling, and can even take a hand at popping corn.

Outstanding features of the 2800 P grill are a tight fitting lid to prevent grease splatter, even distribution of heat throughout the aluminum cooking surface, a handling thermostat to prevent overheating, and a drip spout to clean off grease.

The grill is designed along modern lines with bright, gray-black enamel finish, contrasting with chrome handle covering every exposed part.

Handles are made of tough, black plastic and have plastic feet to protect the grill from table or counter. A swivel, adjustable cord with rubber-sleeve grips is included as usual.

•

Window Fans

Development of a line of window fans, in three sizes, 12-inch, 18-inch and 24-inch, has been announced by Bilden Electric Co., 1137 Dimon Ave., St. Louis 10, Mo.

Outstanding features of these fans, according to the manufacturer, include large-sized, heavy-gauge blades, big motors, and a large motor cooling air stream. The 12-inch, 250-watt, 20-inch, 550-watt, and 24-inch, 1000-watt.

Other features include direct-drive ball bearing motors, adjustable to operate on two speeds, and a sturdy, adjustable guard.

five-year guarantee, etc. All units are two-speed, 1100-800 rpm. The 20-inch and 24-inch models are available on electrically operable type.

•

Sale to Remember

(Continued from page 58)

ring of choking to death. I stopped the car and got out and pulled the lady's head up so it wouldn't wobble then hollered to help from the house. The sad way we laughed up with her feet and head caught in the fence that one man couldn't get him out.

After much wrestling with the car and calling for help in between times I finally found the home. I was certainly relieved to see the wife. I had scarcely introduced and her husband coming toward me as fast as they could. The unusual cadaverous looked home when I was out treating the ladies for him.

They got there and helped to get the cadaverous. The unusual revived to them and they were glad that it had been so sad.

After the three of us had dusted out heads the wife said to her husband, "This is the cassium salesman I was telling you about."

The husband looked at me. It didn't dawn on me to start selling to I had mentally given up the deal as lost, and so all I expected was a grunt and a nod that he didn't want on.

The man said to me, "How much does one of the things cost?" I pacced him the cheapest model we had in the line. "He said, "Is that the best one?" I told him that I had pacced him the cheapest one. He said, "I don't want nothing but the best. How much is it?" I told him, and he said to deliver it anytime I wanted to and gave the check.

I didn't waste no time delivering it—we delivered it that day!

The moral should be that you can never tell when to stand a sale lost and you never know when some unexpected happening will turn the tide in your favor.

Service First

(Continued from page 57)

mulation by having a Warehouse Sale Hall's page in the newspaper announced the sale, to be held after the store had closed, between the hours of 7 p.m. and 9 p.m. Customers wanting to buy a $25 refrigerator or a $87 washer entered the store at a back door, and went upstairs for the freight elevator.

The units were offered without air conditioning at the same price allowed the customer. All of them were running when sold, and had months and years of service on them without repairs.

The sale cleaned out the floor. It also advertised the store's trade-in policy, and many trade-ins developed immediately from the promotion.

The name of every customer who has bought an appliance here during the past 15 years is on a card index showing what was bought. This index forms a valuable part of sales promotion, yielding hundreds of names of customers whose old appliances have reached the point where a trade-in is desirable.

The appliance department is in the separate homeware building across the street from the main building. It occupies a large part of the front and always has its own window display.

Customers who buy appliances on the time-payment plan make their payments in the department, at a window near the reconditioned appliance display.

This arrangement keeps Manager

Elgo Ventilating Specialties

A Marvelous Automatic Shutter

In the first place, the Elgo Automatic Shutter fits more snugly. Secondly, the blades do not flutter — and there are no joints that get loose and rattle. And third, it opens more easily. It is more sensitive to air currents than any other shutter. Sizes from 8" to 52" square — also rectangular.

"Echo" Automatic Ceiling Shutters

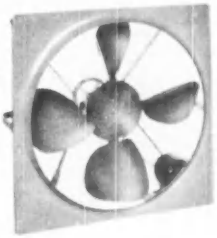
Used for attic ventilation. Installed in attic floor at the base of a penthouse, the louvers being operated by the suction of the fan.

Free CATALOG

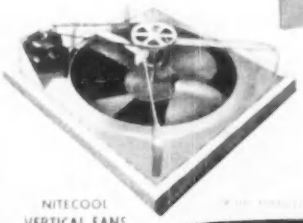
ELGO SHUTTER & MFG. CO.
2738 W. WARREN DETROIT 8, MICH.

HOT STICKY SUMMER HEAT IS COMING

LET'S KEEP 'EM COOL WITH NITECOOL



NITECOOL ATTIC FANS

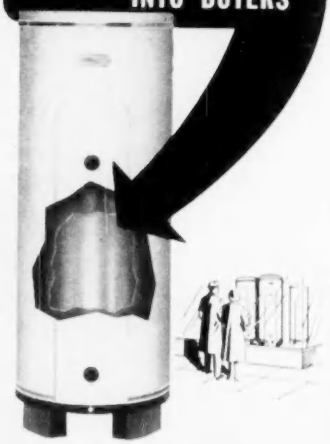


NITECOOL VERTICAL FANS

AIR EQUIPMENT CO.
1713 W. Carroll Ave. Chicago 12, Ill.
56 years of experience and progressive management

Porcelining (GLASS-LINING) does it!

TURNS "LOOKERS" INTO "BUYERS"



FOWLER

Porcelined GLASS-LINED

WATER HEATER

assures rust-free hot water always

Here's the water heater that "clicks" with shoppers!

Porcelined to prevent rust and corrosion, Fowler *stands out* as the water heater that gives users every assurance of pure, hot water always.

ELECTRIC WATER HEATERS

GAS WATER HEATERS

LOWEST PRICED

Sales-wise . . . profit-wise FOWLER is a natural for your store SELL FOWLER!

Get the facts about Fowler

Write Today

FOWLER MANUFACTURING COMPANY

Glasscock checks in touch with his customers. If there is a complaint to be made, or an adjustment demanded, he is directly available to the customer.

The department has an elaborately handsome display floor for new merchandise. Customers building or remodeling can buy a handsome kitchen complete. However, Mr. Glasscock points out the fact that the customer sees other handsome display floors elsewhere in the city, some of them selling identical merchandise.

What the customer can get at Pfeiffer's that she cannot get everywhere else is her assurance of complete satisfaction in the purchase and her full dollar's worth, from the woman customer's point of view.

"We don't care if the woman customer occasionally demands a little of our skin," Mr. Glasscock admits. "Let her get the best of us occasionally, if that pleases her. Getting what she wants from us turns her into a verbal advertisement for Pfeiffer's that could get us many a customer.

"Occasionally we make service calls that cost us money. We just charge off the loss to good will. In the buyer's market we have to spend a little extra now for good will."

Proof of the payoff he points out is the number of repeat purchases being made from that 15-year-old customers' index. "They're coming back for more of the same thing!"

The Southern Market

(Continued from page 54)

wired homes in the last ten years, primarily a partisan figure, has been equal in the South. Twelve southern states added 3,700,000 wired homes in that period (6,700,000 last year). This brought the total to 6,750,000, an increase of 120.5 per cent compared to an overall growth of 87.2 per cent in the U. S. as a whole. As a factor in the overall picture, the South increased from 12.5 per cent of the wired homes at the end of 1939 to 18.4 per cent in January of this year.

Income payments to individuals increased 278.8 per cent in years 1940-48 while U. S. total went up 177.6 per cent in that period. The South is presented 17.8 per cent of the U. S. total in 1948 against 11.1 per cent in 1940.

Per capita income jumped 197.2 per cent from 1940-48 while the U. S. figure gave 144.2 per cent. Walters said. Income figures may well be record-breakers as a result of the new minimum wage law. On a population basis, there was an increase of 6 per cent with all southern states gaining from 3 to 27.6 per cent (the high figure belongs to Florida, except for Alabama and Mississippi where figures were 1.1-1.5 per cent and 2.8 per cent respectively. In families, the increase amounted to 15.4 per cent.

Percentage-wise, the South has done the greatest rise in the number of business establishments in the United States from 1940-49. National total increased 22.5 per cent while the South added 38.4 per cent.

As to business conditions in general, department store sales were a fine indicator, said Walters. In 1949 the sales in the Atlanta Federal Reserve District showed an average much above the national average from January through July. It dipped just below the national figure in August and September, but bounced back always for the rest of the year.

Walters cited the progress made by the nation's electric utility industry in its vast program to expand power generating facilities. Southern utility companies played an important role in this program, he said.

He pointed to figures showing that energy sales to ultimate consumers have risen from a mere 31 billion kilowatt hours sold in 1918 to 98.7 billion in 1938, 240 billion in 1948 and almost 250 billion last year. Average consumption was 857 kwh per home in 1938, 1564 kwh in 1948, and it is predicted this will be close to 2,000 five years from now. Electric company construction is still going on at a good rate. Around $2.5 billion was spent in 1949 and the prospect is for almost that amount this year. In the South the comparable figures are $440 million for last year and plans for over $503 million this year, according to estimates at Hotpoint.

With the astounding expansion to a total of 56 billion since the war, the startling fact stands out that while general power rates went up 70 per cent during and after the war, average per kwh of residential service declined 27 per cent, Walters said.

There is only one of the growth factors and indicators where, sure spell good postwar opportunity for all elements of the electrical industry. The result will be increased in numbers added benefits of electrical living for southern homes, Walters said.

Selling by Radio

(Continued from page 54)

approximately three-quarters of Gunter's accounts to Mr. Lemburg with a percentage kicked back to each.

Ninety per cent of the clients in this concept for electric dishwashers

rewards played during checking periods, and at the beginning and end of the show. Suave, brief commercials are interspersed between games, pointing out that Southern Electric Company carries the city's largest stock of major appliances, and emphasizing free kitchen planning service, free model laundry installations service, and the decorative services offered by the firm.

Along with the reducible prices decreed by the "cooperators," Southern Electric Company supplies small appliances, and on occasional forms award of an automatic dishwasher, conventional washing machine, radios, refrigerators, etc. All of the store's lines are listed on the Quizzo form which each participant uses in playing the game. There is a lot of emphasis on complete electric kitchens offered by the store as well as individual appliances.

Many unexpected advantages have resulted from the Quizzo program. First, the store traffic, at a daily average, more than tripled, and has been growing ever since. Next, the clever show, spurred with so much original ity, has attracted much free publicity from local newspapers and radio stations—all of whom credit the Tallahassee with a fine free radio promotion which neither suspected prior to the first broadcast.

Almost all of the population of Tallahassee has been "exposed" to Quizzo at one time or another, for much as invitations to attend the broadcast are rotated to bring in a different group of people at each time.

The actual sales increase which may be attributed to the radio Bingo game is difficult to estimate. Mr. Lemberg stated, "However, we are proud of our $22,000 volume for the year past, which undoubtedly, was created from among Quizzo contestants. We did not require any participant to buy any item—however, he must come into the store to pick up a blank. This gives us an opportunity to display our appliance lines and the interest thus created has resulted in many direct sales."

Sales from Rentals

(Continued from page 78)

can can use, and they are frequently sold."

There is a partial windfall of auxiliary deals around appliances on the floor of Electric Homes. The vacuum does not release lights as was opened. So does the refrigerator and its contents of artificial food, ice cubes and added interest. The swept Electric, on the other hand, is filled with real food.

Always there are glands of light and gaslight at Electric Homes. Below, at a time clock on Saturday and holidays lights go on automatically at 7:30 P. M. and the store is brightness illuminated until 12 P. M.

An attractive feature at Electric Homes which was designed by Mr. Stager is a display counter for extra appliances. This is built in three sections and placed in the center of the store. Two straight sections are placed together lengthwise in the store while the third is curved, inviting customers and facing the customer. The displays of extra appliances which are frequently spotlighted stand up to eye-catching, action light from outside the store.

In the left of the entrance is the very attractive Record Bar, the equipment of high quality, including the radio control and also designed by Mr. Stager. The counter here is in two sections, a straight horizontal one and a curved

COMMERCIALAIRE'S Ranch Type Vertical Discharge Attic Fan.

One of many items of a complete line "DESIGNED TO SELL" 1950 Catalogue available to distributors on request.

SERVING THE SOUTH . . .

NORFOLK, VA. Warehouse:
823 W. 21st Street
Agent: Goodman Bros. & Co.

ATLANTA, GA. Warehouse:
788 Spring St., N.W.
Agent: F. W. Collins Co.

NEW ORLEANS, La. Warehouse:
823 Perdido St.
Agent: A. J. Weilbaecher Co.

DALLAS, TEX. Warehouse:
2nd Unit Santa Fe Bldg.
Agent: Wm. Durham & Assn.

COMMERCIALAIRE, INC.
300 Pacific St. Brooklyn 2, N. Y.

DAVIS

Headquarters **FOR ELECTRICAL CORD SETS**

"WRIST ACTION" CORD SET

Wireless swivel plug turns, bends, swings, spins — eliminates all cord wear, 95% of all cord troubles. Exclusive, patented design. A proven seller. Attractive display cord free.

RANGE CONNECTORS

Finest quality cord and receptacles, including new flush range receptacle. Underwriter's Approved. 220 volt, 50 amperes. Eliminates costly electrical work in connecting ranges.

See your jobber or write direct for full details and prices.

DAVIS Mfg. Company
PLANO 1, ILLINOIS

Southeast Rep. H. K. Dowers Co. Walton Bldg. Atlanta, Ga. — Southwest Rep. M. C. Hale Co. Thomas Bldg. Dallas, Tex.

hind end of the Bar a curved section.

Electric Homes, Inc., which is located in the popular Southside community shopping center of Five Points, was established in the fall of 1946. In October, 1947, a downtown branch was opened.

Rental Check List

(Continued from page 78)

of her own. Then the dealer is in a good position to apply the rental as a down payment on a new appliance or a special inducement for buying.

On when the sale isn't completed—yes, it will happen even with this system—the appliance dealer has some rental income that will offset the time and expense involved in the home demonstration. In fact some dealers count on this extra income to offset all the repairs and delivery charges for all home demonstrations.

Embarking on the plan of renting home appliances should be done on a complete basis. If it is discovered that this appliance renting is just a dodge to get around the tough selling problem of home demonstrations, it won't work with complete success.

To be most effective it should be a regular service offered all customers. When a customer's own refrigerator is in for repairs, a rental should be promoted. When someone needs something for a short time, a rental should be suggested to help these customers with their problem.

With this underlying idea, the word will spread quickly that the appliance store definitely does have items for electrical appliances for rent, and not just to prospective customers but to everyone. This will build good will that will give people confidence in the store—confidence that will make the cash register ring.

Clever Promotions

(Continued from page 78)

tive advertising with manufacturers is added.

After all types of advertising showing almost every appliance handled by the department, Mr. Bumpus claims that the best selling gift items are electric mixers, toasters, and automatic popup toasters. Another interesting observation is that portable radio sales have tended to offset a decrease in sales of console radios due to a switch to television. To aid in impulse buying, and also to increase store traffic, a small inventory of batteries for portables is handled.

Striving to maintain an atmosphere of luxury and refinement, the appliance department avoids the use of trucks, free goods, coupons and entry blanks as a general practice. Instead, Mr. Bumpus says he would rather use an original stunt to merchandise his appliances.

Brumberg's, located at 20th Street and Second Avenue in Birmingham, is thought to be Alabama's oldest jewelry store. Originating as a jewelry store in 1876, it now has a large furniture department and devotes its entire fifth floor to the sale of electrical appliances.

Soft colors and the use of ceiling spotlights emphasize the appliances in the department. Wall sections are in canary yellow, brown, and buff. Small appliances grace curving counters, and large appliances stand against the walls all set for operation.

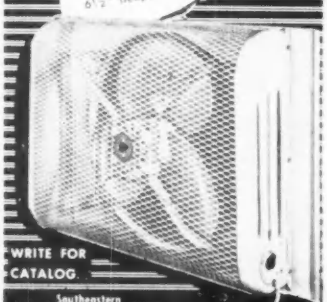
The department has no outside salesmen, as follow-up calls are made from leads obtained from store traffic.

For your needs in WASHER PARTS
TRY
Refrigeration Supply Co.
1831 W. Broad St.
Richmond, Va.

FRIGID
Slimline **WINDOW FANS**

The new motor noise silencer rubber hub propeller and motor mounting makes this a really quiet window fan.

Telescoping side panels, adjustable for windows from 29½" to 38" wide. Displaces 3520 cubic feet of air per minute (changes air in 2 or 3 average size rooms per minute). 3 Quiet Speeds 700, 900, 1100 R.P.M. Occupies little usable room space — only 6½" deep.



WRITE FOR CATALOG.

Southeastern Representative & Warehouse:
W. H. BERRY COMPANY
45-47 Alabama St., S.W. Atlanta, Georgia

CIRCULATORS & DEVICES MFG. CORP.
BROOKLYN 32, N. Y.

Installation Practice

(Continued from page 5)

than half, do not subsidize wiring installations.

The practice of electric utility companies with respect to wiring subsidies may change as excess generating capacity increases with the completion of new plants. In this connection, it is interesting to note that one large electric utility company, the Detroit Edison Co., is reported to have discontinued free installation of ranges, water heaters, and electric. The company has committed $600,000 for wiring allowances in 1950 in its area served by approximately 1,200 appliance dealers.

Another factor affecting appliance installations is the trend toward lower installation costs. For example, a survey conducted by Hotpoint, Inc., indicates that the national average cost per range installation in 1949 was $35, as compared with an average of $40 in 1948 and $49 in 1947. The survey also indicated that while wiring costs are still a bottleneck in the trade, dealers have established better working arrangements with electrical contractors. Plumbing connections appear to be a more serious problem with the dealer now.

The outlook for the next few years for the appliance dealer is optimistic in many respects.

The electric utility industry is nearing completion of an expansion program which will provide 40% increase in generating facilities over the 1945 peak.

This will lead some companies to broaden promotion programs in their local areas and to increase their appliance installation underwriting.

As business becomes more competitive in the electrical contracting field, some contractors will be willing to accept small installation jobs such as range wiring, etc., and increase a volume in the field into be realized.

Finally, the effects of the industry's promotion adequate wiring is being reflected in an increasing number of new homes and apartments wired for electric ranges and other appliances at the time of construction.

Fan Promotion

(Continued from page 5)

one keeping cool with fans. The two weekly suburban Maryland papers, the *Bethesda Tribune* and *Montgomery County Record*, ran similar advertisements with small drawings on keeping cool with fans from Central Electronics. Coupons similar to those enclosed in the mail were inserted in the newspapers and 'phone determine response over the promotional medium.

The campaign beginning on May 2 consisted of 60-minute television show from 5:30 to 6:30 p.m. on the local station WNBW. Channel 4 staff artist Central Electronics sketch on the radio screen. The weather man will appear on program and report weather conditions on a map behind him after which there will be a couple of minutes of fan promotion.

Crawford recalled that last year, 30 days into the campaign, much to the surprise of everyone sold 32 window fans and 153 desk or pedestal type fans.

During a fair that spell be recalled that a mysterious camera appeared from some unknown source and filmed customers trucking out of the store with fans under their arms.

A few days after a fan has been installed, a call is made to the customer's home to find out whether the fan is operating satisfactorily. If there is an difficulty, a representative goes out to the customer's home to straighten matters out.

Handbooks of Adequate Wiring

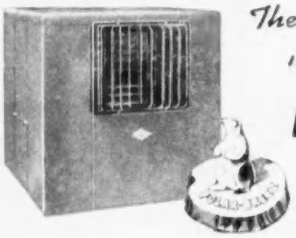
Two Valuable Booklets available with Electrical South.

"Handbook of Residential Wiring Design" and "Handbook of Farmstead Wiring Design," summarizing latest authoritative information on adequate wiring systems, may be obtained with a three-year subscription to Electrical South at the special price of $2.50 for a limited time. Send name, address, and remittance at once to make sure of getting your copies.

ELECTRICAL SOUTH

806 Peachtree St., N. E. Atlanta 5, Ga.

NOW! LOW COST AIR-CONDITIONING



The New Improved

"POLAR BREEZ"

AIR COOLERS

with the *NEW*

AUTOMATIC HUMIDITY

and

TEMPERATURE CONTROL

If you handled the nationally accepted and profitable Hall line before the war, you'll be glad to know these top quality evaporative cooling units are again available with many improvements. "POLAR BREEZ" is sold in complete "packaged units" in various sizes for all types and sizes of business buildings and stores.

Air is purified by a chemical process removing bacteria and algea. Range—2,000—25,000 C.F.M. Aluma Fibre Filter Cooling Pads. Self cleaning—no servicing or replacement. Weather Proof Metal Housing. Multi Blade Pressure Type Blower. Directional Flow Grille. Roto Atomizer. Doubles cooling and washing action!

TERRITORIES AVAILABLE TO PROGRESSIVE, RELIABLE DISTRIBUTORS AND DEALERS.

INVESTIGATE NOW! Write, wire, or phone for details. Morton Grove 4594.

AIR COOLING ENGINEERING COMPANY

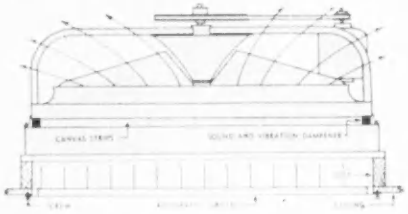
DEPARTMENT C **MORTON GROVE, ILLINOIS**

Get set for next summer's sales with the great

Quietaire

THE REVOLUTIONARY ATTIC FAN THAT

SELLS FOR LESS, OFFERS BIGGER DEALER PROFITS



NOW is the time to contact

WESTINGHOUSE ELECTRIC SUPPLY CO.

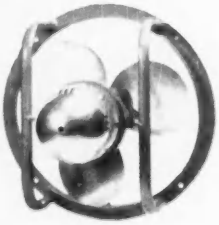
or write direct to

QUIETAIRE CORPORATION

505 N. Hutcheson Ave. Houston, Texas

16" STREAMLINE EXHAUST FAN

C.F.M. 2500



$17.50

plus 10% Federal Excise Tax

- 110 volt, 60 cycle, A. C.
- Torrington Aluminum Fan Blades
- Unbreakable Steel Frame
- 6 H. P. Thermal Protected Motor
- One-year Unconditional Guarantee

WRITE FOR CATALOG 55

STANDARD ELECTRIC

Manufacturing Co.

West Berlin, New Jersey

CTI PROPERLY TRAINED MEN HAVE THE "KNOW HOW"

PRACTICAL SHOP TRAINING

in

ELECTRICITY, MAJOR APPLIANCE

Service, Maintenance, Installation

Write for Catalog ES5—Veterans ask about GI Training

Manufacturers, distributors, etc., when you need TRAINED men contact CTI Placement Bureau.

COMMERCIAL TRADES INSTITUTE INC.

of Alabama

200 South 20th St., Birmingham, Ala. — Phone 7-0555

Member: Southern Association of Private Trade Schools

Handbooks of Adequate Wiring

Two valuable booklets available with Electrical South.

"Handbook of Residential Wiring Design" and "Handbook of Farmstead Wiring Design" summarizing the latest authorative information on adequate wiring systems, may be obtained with a three-year subscription to Electrical South at the special price of $2.50 for a limited time. Send name, address, and remittance at once to make sure of getting your copies.

ELECTRICAL SOUTH

806 Peachtree St., N. E. Atlanta 5, Ga.

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The Advertisers Index is published as a convenience, and not as a part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert.

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"TRIPLE PROFITS For You... From Me!"

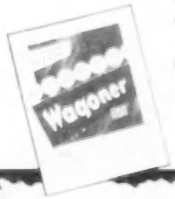
Wagoner AUTOMATIC ELECTRIC Table Top WATER HEATERS Spell PROFITS!

"I can sell myself ... you close the deal ... *that's profit number two.*"

After I've sold, I even help you with installations. All your men have to do is make two simple pipe connections ... and these with efficiency and gusto I carry with me. *Your Next Installation Cost? — that's profit number two.*

And in addition to these profits ... *you profit a third time* ... because the profit margin on Wagoner products is larger than on any other that men

MAIL COUPON TODAY for FREE Wagoner Booklet showing 40 products — Wagoner Water Heaters and Pumps. It gives *complete details.*



MR. W. G. WAGONER, *President*
Americo & Southern Corp., Nashville 10, Tennessee

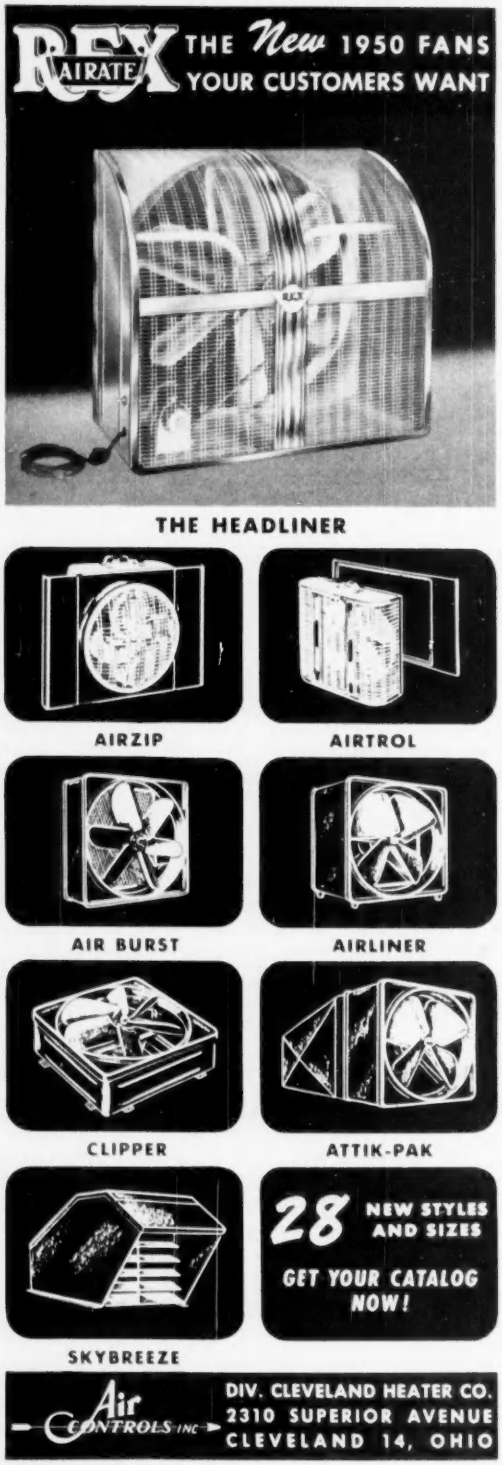
Please send me booklet 7-55, which describes the complete line of Wagoner Products—free of charge and without obligation of course.

NAME

STREET NAME

ADDRESS

CITY STATE



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The Advertiser's Index is published as a convenience, and not as a part of the advertising contract. Every care will be taken to Index correctly. No allowance will be made for errors or failure to insert.

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ZENITH World's FOREMOST Radio Manufacturer

Brings You the World's FOUR MOST Popular Portables

Dealers everywhere acclaim these the "SELLINGEST" sets in radio!

They're tops for turnover—these handsomely styled, super-powered portables with the many sales-making features only Zenith can provide. Look them over. Compare them for amazing beauty, for demonstrable features, for honest quality, for built-in value. Then, note their down-to-earth prices—and you'll easily see why Zenith dealers are looking forward to this summer as the biggest money-making season in portable radio history!

the sensational . . .

New Zenith "Universal"

with styling that stops them . . . performance that sells!

Even in remote locations where many portables fail, the Universal* comes through with amazing clarity and volume. The secret? An extra-powerful circuit with Tuned RF amplification . . . A new, more sensitive Alnico 5 Speaker and the exclusive Wave-magnet*. Plays instantly when lid is opened, turns off when closed. Luggage-type buffalo-grained case in black or brown. A natural for summer sales! AC/DC or Battery operated. $49.95

Customer's Choice — Coast-to-Coast!

world's finest portable—with the world's finest reputation . . .

"Trans-Oceanic"

The world-famous portable that "extra-powered for long-range reception." Brings in Standard Broadcast plus international Short Wave on 3 separate bands. Plays only when unclasp, turns off when closed. Rugged cabinet in handsome black or vacuum blue grain plastic. AC/DC or Battery operation. $99.95

Tip-Top Holiday

A sensational beauty that catches everyone's eye! Lid swings up to reveal giant dial—gives tip-top listening pleasure. Set plays when lid is raised, shuts off when closed. Rugged cabinet in handsome black or vacuum blue grain plastic. AC/DC or Battery operation. $39.95

Zenith "Zenette"

Exactly what customers want in a personal radio! Only Zenith engineering could produce a tiny portable with such big-set performance. Has built-in Wave-magnet. Plays on AC/DC or Battery. Black moulded cabinet with gold-tone grille and knobs gives a distinctive quality appeal. $39.95

. . . if you want PROFITS—you want ZENITH PORTABLES!

*Reg. U. S. Pat. Off. Suggested retail price. West coast and far South prices slightly higher. Prices subject to change without notice.

ZENITH RADIO and TELEVISION

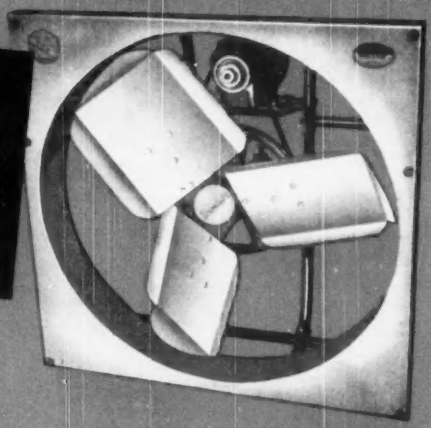
ZENITH RADIO CORPORATION
6001 DICKENS AVENUE • CHICAGO 39, ILLINOIS

Move more fans with fans that move more air!

Shovelaire®

— FANS FOR INDUSTRIAL COMMERCIAL and HOME USES!

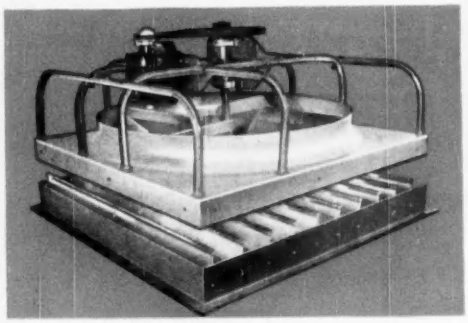
The new 1950 line of Shovelaire fans offers every type from a 10 inch "buzz" fan with 982 CFM to a heavy industrial exhaust fan with 22,300 CFM capacity. There's a Shovelaire fan to handle your ventilating requirement better, at lower cost.



"Old Reliable" Shovelaire

EXHAUST FANS

Nine different models in exhaust fans that defy comparison. For home, shop, factory or general commercial use. Maximum air delivery, minimum noise. Variable 8-speed pulleys. Check catalog for features.

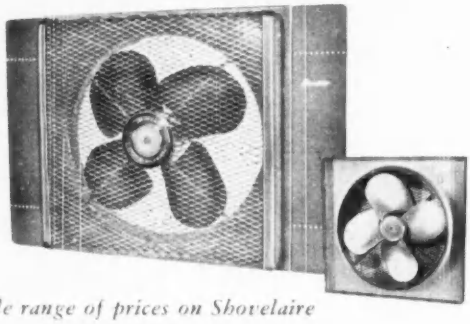


Low attic clearance in Shovelaire

VERTICAL DISCHARGE FANS

In 3 sizes; 8 speed pulley; patented Shovelaire blades; ball-bearing shaft; lightweight tubular steel steel frame, rectangular to save space. Operates vertically or horizontally. Shutter optional. 30" fan (7100 CFM) lists as low as $109.50.

Distributors: Investigate the Shovelaire plan. Write for prices and literature.



Wide range of prices on Shovelaire

THIN WINDOW FANS

Only 5 inches thick. Compact, efficient and beautifully designed. Economy group includes 3 models. Deluxe VERI-THIN group offers two sizes, 4-speed reversible. Moves more air than any other window fan of equal size.

Dealers: Write for new catalog. See the line, get prices and name of nearest distributor.

C&H Air Conditioning Fan Company, Inc.

General Offices . . . 1603 Dekalb Ave., N. E.
Atlanta, Ga.

2-WAY PROTECTION WITH SQUARE D CIRCUIT BREAKERS

RESIDENTIAL and INDUSTRIAL

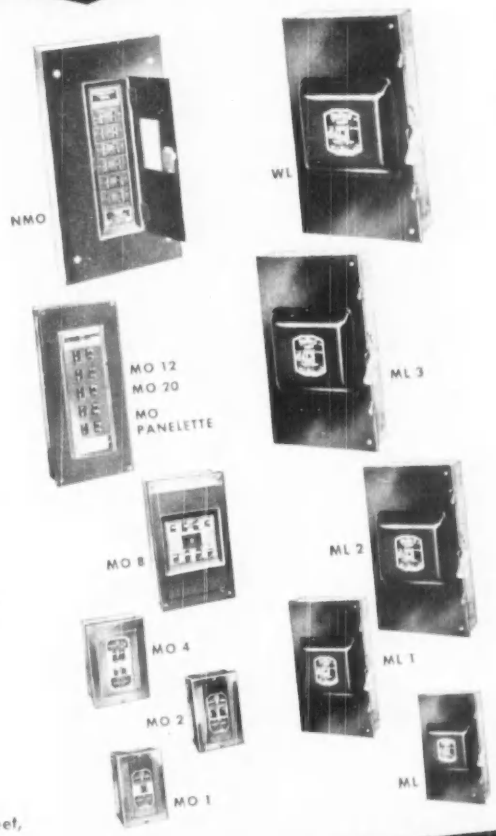
THERMAL-Coilless-MAGNETIC

—combining the proven advantages of both Thermal and Magnetic tripping elements. They give positive protection against dangerous overloads and act instantaneously on "shorts." Useless tripping on harmless momentary overloads is eliminated.

1 **THERMAL** element is a bi-metal providing positive and timed response to heating effects of both load current and surrounding atmosphere. The life of wire insulation is prolonged by limiting total temperature to a safe value.

2 **MAGNETIC** element responds instantaneously to the higher values of current characteristic of dangerous overloads and "shorts." Damage is minimized.

Both **ELEMENTS ARE NEEDED FOR** *Complete* **PROTECTION!**



Write for Bulletin SA 590
Square D Company, 6060 Rivard Street,
Detroit 11, Michigan

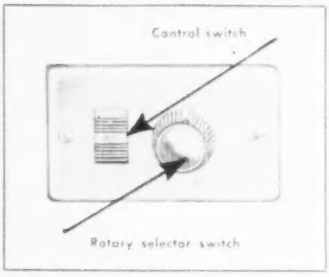
SQUARE D COMPANY

DETROIT • MILWAUKEE • LOS ANGELES

SQUARE D COMPANY CANADA LTD., TORONTO • SQUARE D DE MEXICO, S.A., MEXICO CITY, D.F.

WIRING NEWS

A PERIODICAL DIGEST OF WIRING IDEAS FROM THE GENERAL ELECTRIC CONSTRUCTION MATERIALS DEPARTMENT



Master Selector Switch Increases Versatility Of Remote Control!

Here's the newest addition to General Electric's step-saving remote-control wiring system—an addition that affords a wide variety of new applications. Replacing gangs of separate ON and OFF controls, this compact master selector switch provides instant, positive control of *up to 9 different* circuits—and, very simply, too!

To Control Individual Circuits

Turn rotary selector switch to the desired circuit and then press the control switch for ON or OFF.

To Control All Circuits

Merely press the control switch ON or OFF while rotating the selector switch through all nine positions.

Plan to use it for one-panel control of large plant areas . . . for site, certain emergency light control in warehouses, banks, office buildings . . . for pathway lighting through yards and wharves . . . or wherever else one point, multi-circuit control is needed.

The G-E master selector fits all standard mountings for flush devices.

Stop in at your local General Electric distributor's and see the entire remote-control system—he'll be glad to demonstrate it for you. Or, if you prefer, check box (A) in the coupon below for complete literature.

Can You Afford To Save On Switches?

Why gamble? Replacements and service calls often cost many times the small savings made on lower-grade switches. So, when your plans call for switches, insist on high-quality, long-wearing General Electric specification-grade switches.

Free Guide Speeds Box Selection

To make your next layout job an easy, certain one, General Electric offers a free switch and outlet box chart. With this handy specification aid, you'll know at a glance the proper outlet, switch, or utility box for all wiring jobs.

Printed in color and carefully illustrated, this new *Box Buyer's Guide* shows the dimensions of all standard boxes. It gives the number of conductors—by wire size—permitted by the National Electrical Code for the various box sizes and types. And, for easy reference, there's included the section of the National Electrical Code covering box sizes. Send for your copy today—just check box (B) in the coupon.

No Weak Spots in Wet Spots

For wiring in locations where water and dampness present a problem, your best bet is General Electric Flameguard® Type TW wire.

Tough, thermoplastic insulated General Electric Type TW takes rugged jobs in stride. Use it in raceways or conduit laid in concrete or masonry . . . for machinery wiring in damp or humid atmospheres . . . for conduit installations of all kinds.

Flameguard Type TW is easy to pull, clean to handle. In addition to its flame- and moisture-resistant qualities, the Flameguard insulation is highly resistant to oils, acids, and alkalies.

For more information on Type TW, check box (C) in coupon.

Quality Pays Off In Protection

For locations where severe atmospheric corrosion or moisture is present, G-E white rigid conduit is still the old standby. Made of fine-quality steel, G-E White is hot-dipped galvanized, and further protected by a glass-smooth Glyptal® finish, inside and out.

The carefully controlled manufacture of G-E White provides conduit that is reliably uniform. The interior surface is smooth for speedy wire pulling. Threads are sharp and clean cut for easy connection. Consistent wall thickness facilitates on the job threading and cutting.

In interior installation and where not subject to severe corrosive influences, use G-E Black Conduit. On many jobs, G-E Black will give you many economies. Try these two fine General Electric products the next time you buy conduit.

Remember, too, that General Electric supplies a complete line of fittings and accessories. Order them along with your conduit and avoid the costly annoyance of mismatching and poor-fitting materials on the job. For more information on conduit, check box (D) in the coupon.

Tough Cords for Rough Jobs!

Whether it's for a powerful portable saw . . . heavy-duty paint sprayer . . . or light-flow sprayer—specify "General Electric" on all your flexible cord replacements. You'll appreciate the way G-E cords make it possible to operate equipment efficiently long after other cords become useless.

G-E flexible cords are made in a variety of types and sizes for medium- and heavy-duty use. Look into their advantages the next time you make a cord replacement. For further information check box (E) in the coupon below.

Section K9-524
Construction Materials Department, General Electric Company, Bridgeport 2, Connecticut

Please send me full information on:

A	Remote-Control Master Switch	Name	Title
B	Box Buyer's Guide	Company	
C	Type TW	Address	
D	Conduit and Fittings	City	Zone State
E	Flexible Cords		

GENERAL ELECTRIC